

# SMOKE SIGNALS

For Radio Amateurs • By Radio Amateurs

Published Monthly Since 1969 • Our 25th Year  
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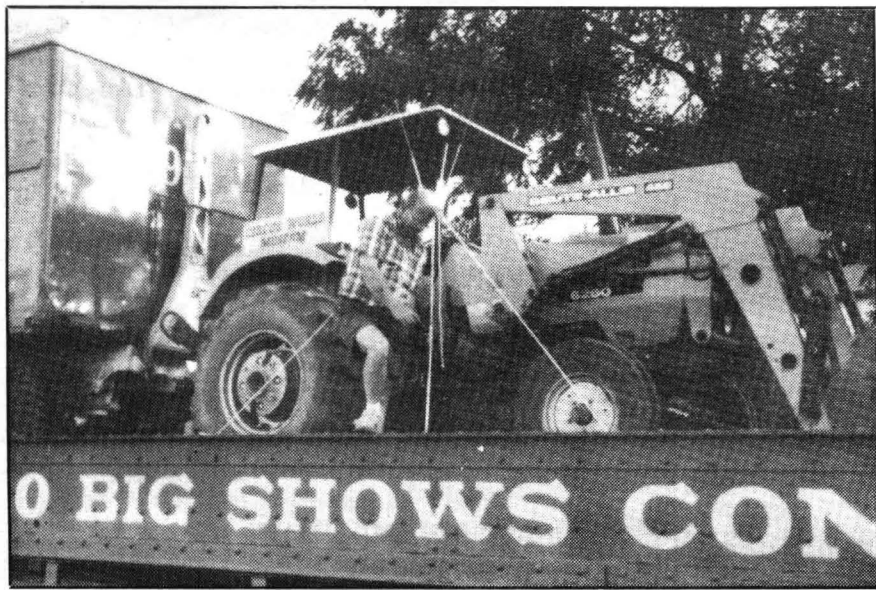
Vol. 25 No. 9 • 297th Consecutive Monthly Issue • Baraboo, Wisconsin • September 1994

## HF Operation from the one and only Great Circus Train



Maury Mead, W9FBC, of Neenah, WI, operated on day one of the Great Circus Train's two-day journey from Baraboo to Milwaukee. The train carries a colorful and priceless cargo of meticulously restored circus wagons to Milwaukee for the Great Circus Parade.

- Photo by George Halper/W9SUF



At left, Don Evenson, K9JYX, Baraboo, ties guy ropes to the multi-band mobile antenna, on the first flat car behind the coaches. At least ten hams were helping install that antenna and its radials. Only 26 stations were worked on 20, 40, and 75 meters. The poor station performance was likely due to the antenna's location, which was close to and below a number of large metal objects. Antenna experts will be consulted about ways to get the maximum EM RF field above those objects - without the antenna being too high.

- Photo by George Halper/W9SUF

## HARP-2 Amateur Radio Balloon Flight is Successful

By Jim Kalrath, N9KAN  
P. O. Box 14592  
Madison, WI 53714-4592

August 6th, 1994, 8:00 a.m.: It was a beautiful day on the N9QIP farm in Arlington, WI, just right for the launch of the HARP-2 High Altitude Radio Project.

The project consisted of a container of radio equipment including a UHF 1-watt FM transmitter on 447.440 MHz, a VHF receiver on 144.325 MHz, and a 35mm still camera w/auto film advance loaded with 36 exposure film, all controlled with a BASIC Stamp on-board computer. The computer also read back the inside and outside temperature every 8.8 minutes by CW. This was also the right time for the famous N9LTD ID. Attached to the box was a radar reflector, a small 10 meter beacon, and parachute. On top was a large weather balloon filled with hydrogen. Power was supplied by a 6-cell lithium battery pack. All this weighed in at 5 pounds 4 ounces.

Launch occurred at 9:03 a.m. CDT. The package ascended slowly, then headed to the east. N9LTD stayed at the launch site and kept track of temperature, telemetry and other things. Brad, WB9WHI, and Kevin, WB9YHB, took off together, as did Daniel, N9TOR, Pete, AA9AD, and myself for the purpose of tracking, hunting, and eventually finding the package after it came down. We were also joined by Steve, WB9ZRE.

There was a special event net in progress on the balloon repeater, run by Paul, KA9WAM, who took check-ins all morning long. Hams from Michigan, Illinois, Iowa, Minnesota, and all parts of Wisconsin participated in the event. We even heard a repeater in Indiana coming across!

Maximum altitude was only about 30,000 feet. That was about half of what was supposed to happen. (We may need a little more lift next time.) Telemetry told us that the outside temperature reached about 10 degrees below zero. Had the

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## ELMER

By Rich Regent, K9GDF



Badger State Smoke Signals

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# WHAT'S HAPPENING

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EDITED BY KENNETH A. EBNETER, K9EN, 822 WAUONA TRAIL, PORTAGE, WI 53901

## Swapfests and Other Social Events

**SUNDAY, SEPTEMBER 11, 1994.** RADIOFEST Hamfest & Computer Expo, at the Tri-State Blind Society, 3333 Asbury Rd., Dubuque, IA. Contact: Gerald Lange, 2191 Graham Circle, Dubuque, IA 52002 (319) 556-3050 or Loren Heber, NOYHZ, 9479 Lauderville Rd., Dubuque, IA 52003. (319) 556-5755.

**SEPTEMBER 17-18, 1994.** SUPERFEST, Peoria, IL. Contact: Peoria Area ARC., PO Box 3508, Peoria, IL 61612-3508. (309) 685-6698.

**SEPTEMBER 24-25, 1994.** RADIO EXPO. Lake County Illinois Fairgrounds, RTs. 45 & 120, Grays Lake, IL. Contact: Chicago FM Club, PO Box 1532, Evanston, IL 60204.

**SUNDAY, OCTOBER 23, 1994.** KMRA Swapfest, Waukesha County Exposition Center, in the Forum Building, Highways J and FT, Waukesha, WI. Contact KMRS Swapfest, PO Box 411, Waukesha, WI 53187-0411

**SATURDAY, OCTOBER 29, 1994.** HAMFEST Minnesota & Computer Expo., St. Paul Civic Center, ST. Paul, MN. Contact Hamfest Hotline (612) 535-0637.

**SATURDAY, NOVEMBER 5, 1994.** The Milwaukee Repeater Club is proud to sponsor the 10th annual "6.91" Friendly Fest" from 8:00 a.m. to noon. (sellers admitted at 7:00 a.m.) NEW LOCATION: Waukesha County Expo Center Arena. VE testing. Contact Milwaukee Repeater Club, Inc., PO box 2123, Milwaukee, WI 53201.

**NOVEMBER 19-20.** Fort Wayne Hamfest, Allen County War Memorial Coliseum Exposition Center. Contact: ACARTS, PO Box 10342, Fort Wayne, IN 46851.

**SUNDAY, JANUARY 8, 1995.** Midwinter-Swapfest sponsored by the West Allis RAC. Contact WARAC, PO Box 1072, Milwaukee, WI 53201.

**TUESDAY, FEBRUARY 28, 1995.** Northern Wisconsin Radio Auction. Contact: Steve Hart, KA9OMC, Route 1, Box 54, Knapp, WI 54749.

**SUNDAY, APRIL 2, 1995.** Madison Swapfest. Contact: MARA, PO Box 8890, Madison, WI 53708-8890.

**SATURDAY, MAY 13, 1995.** Lakeshore Hamfest. Contact: ManCoRad. PO Box 204, Manitowoc, WI 54221-0204.

**SATURDAY, JULY 8, 1995.** South Milwaukee Swapfest, Oak Creek, WI. Contact SMARC, po box 102, South Milwaukee, WI 53172. (414) 672-3235.

See also the back page and flyer ads for additional information on many of these events.

As a service to our readers, this section of Badger State Smoke Signals is available without charge to list your upcoming Swapfest, Hamfest, dinner, picnic, party or other event of interest to Radio Amateurs in Wisconsin and nearby areas. Send information on your event to Kenneth A. Ebnetter, K9EN, 822 Wauona Trail, Portage, WI 53901. In addition, space is available at attractive rates on our advertising pages. For information on rates and requirements for our advertising pages, please contact K9ZZ or K9EN.

## Club Meetings



Due to space limitations we cannot always carry the full listing of Wisconsin and area

club meetings. Please save the following listings for your future reference. We hope to have the full listing at least three times a year, and will carry any changes or additions between full listings.

**ARROWHEAD RADIO AMATEUR CLUB, INC.**  
(Superior, WI)

The monthly meeting of the ARAC is held on the second Tuesday of the month at the WITC Conference Center, 600 N. 21st Street, Superior, Wisconsin, at 7:30 p.m. Board meetings are held prior to the regular meeting.

**BADGER AMATEUR RADIO SOCIETY**  
(W9YT - U. W. - MADISON)

Monthly while school in session - 2nd Tue. - 5:30 p.m. - B-265G, Electrical Engineering Bldg. For more information call (608) 262-1142.

**CENTRAL WISCONSIN RADIO AMATEURS, LTD.**  
(STEVENS POINT)

Second Wed..

**EAU CLAIRE AMATEUR RADIO CLUB**

2nd Tue. - 7:30 p.m. - Parks and Recreation Bldg., Oxford and 1st Streets, Eau Claire. Hams, guests welcome. Travelers welcome on wide area club repeater K9UXP, 146.31/91.

**FOUR LAKES AMATEUR RADIO CLUB (MADISON WI)**

First and third Tues - 7:30 p.m. - Red Cross Bldg., 4860 Sheboygan Ave., room "C" downstairs. It is the next building west of the Hill Farms State Office building. The meetings start promptly at 7:30 pm.

**FOX CITIES AMATEUR RADIO CLUB**

Third Mon. - 7:00 p.m. - Roosevelt Jr. High School, 318 E. Brewster St., Appleton. Info: (414) 766-3886.

**GREATER MILWAUKEE DX ASSOCIATION**

Fourth Mon. of the month at 7:30 p.m. Contact any GMDXA member or Dan Reese, N9XX, (414) 529-9806 (before 9 p.m. please) for meeting location.

**GREEN BAY MIKE AND KEY CLUB**

Second Thur. 7:30 pm - Media Services area of the J. M. Science Building at St. Norbert College in DePere.

**GREEN FOX AMATEUR RADIO CLUB**

Third Mon. - 7:30 p.m. - Green Lake Town Hall, int. of county hwy. K and N.

**KETTLE MORAINES RADIO AMATEURS**

Second Fri., 7:30 p.m. at the Waukesha County Technical College, Campus Science Building, Room 102. Talk-in on the N9KS 147.39 repeater.

**LAKESHORE RPTR. ASSN.**

Last Tue., Jan., Apr., Jul., & Oct., 7:30 p.m. Red Cross Bldg., 4521 Taylor Ave., Racine, WI.

**MADISON AREA REPEATER ASSN**

Here are the meeting dates for MARA for 1994: January 10, 1994, March 14, 1994, September 12, 1994, November 14, 1994

**MANITOWOC COUNTY RADIO AMATEURS**

Directors Meeting: First Wed. Held at 7:30 p.m. in the basement, Manitowoc City Hall, 817 Franklin ST., Manitowoc.

General meeting: Second Wed. Held at 7:30 p.m. at Associated Manitowoc Bank.

**MENOMONEE FALLS AMATEUR RADIO CLUB**

Last Tue. - Doors open 7:30 p.m., meeting begins 8:00 p.m. - Security Savings and Loan, Menomonee Falls. Amateurs and guests welcome.

## Badger State Smoke Signals

**Amateur Radio  
Education and Information**

**PUBLISHER:** Kenneth A. Ebnetter, K9EN, 822 Wauona Trail, Portage, WI 53901. Telephone (608) 742-3560.

**EDITOR:** Jim Romelfanger, K9ZZ, 412 1/2 Ash Street, Baraboo, WI 53913. Telephone (608) 356-4031.

**TREASURER:** Jim Decker, WB9UQT, P.O. Box 337, Baraboo, WI 53913-0337.

**CONTRIBUTING AUTHOR:** Richard R. Regent, K9GDF, 5003 South 26th Street, Milwaukee, WI 53221.

### Subscriptions

1 year	(12 issues)	\$12.00
2 years	(24 issues - save \$2.00)	\$22.00
3 years	(36 issues - save \$4.00)	\$32.00

Special club package reduced rates are available. For information, contact Ken Ebnetter, K9EN.

### When to Send It

The closing date for each issue is the first of the month for the next month's issue. For example, the closing date for the June issue is May 1.

The only exception is for participating clubs. Participating clubs are requested to send their material no later than FIVE DAYS after the club's meeting. For example, if a club meets on the 4th of the month, the material should be sent no later than the 9th of that

month. This material is to be sent to the Editor.

### Where to Send It

Address changes and corrections should be sent to Ken Ebnetter.

Editorial material, photographs, feature articles, display ads, and exchange papers should be sent to Jim Romelfanger.

Inquiries about advertising should be directed to Ken Ebnetter.

Swapfest information should be sent to Ken Ebnetter. Swapfest ads should be sent to Jim Romelfanger.

Subscriptions should be sent, with check or money order, to Jim Decker.

### Conditions for Reprinting or BBS Posting Material from Badger State Smoke Signals

Permission is hereby granted to reprint articles or posting articles on radio or telephone bulletin boards from *Badger State Smoke Signals*, providing credit is given to the original author, publication in which the article first appeared, and to *Badger State Smoke Signals*. **THIS CREDIT IS MANDATORY, AND NO MATERIAL MAY BE PRINTED OR POSTED UNLESS IT IS GIVEN.** This newspaper is produced by volunteer Radio Amateurs, and is non-profit. This newspaper is mailed from Portage, WI 53901. *Badger State Smoke Signals* is incorporated as a Wisconsin non-stock, non-profit organization.

### Editorial Disclaimer

The opinions expressed in editorials, guest editorials, columns, articles, and letters from readers are the opinions of the authors only, and do not, unless otherwise stated, express or imply endorsement by *Badger State Smoke Signals*, or by any other individual or organization.

**MILWAUKEE RADIO AMATEURS CLUB**

Last Thursday evening, Wauwatosa Savings and Loan (lower level) at 7500 W. State St. in Wauwatosa. Meetings begin at 7:30 pm 12 months of the year.

**NORTHERN WISCONSIN RADIO CLUB**

4th Tue. - 7:30 p.m., Sept. through April. Peppermill Restaurant, Thunderbird Mall North, Menomonie, WI. Guests welcome.

**NORTHWOODS ARC (RHINELANDER WI)**

Third Tue.. Doors open at 7:00 p.m. Meeting at 7:30 p.m. South Park School, Rhineland, WI. Talk-in on 146.93/.34. All interested visitors to the Northwoods are welcomed.

**OSKOSH AMATEUR RADIO CLUB**  
(see Winnebago ARC listing)**OZAUKEE RADIO CLUB**

Second Wed. - 7:30 p.m. - Grafton Multitpur--pose Senior Center.

**QCWA - WISCONSIN CHAPTER #55**

Contact Erwin Froelich, W9RZW, Treasurer, Rte 1 Box 177D, Pine River WI 54965. For information about meeting dates or joining QCWA Chapter #55. The Wisconsin Chapter holds Spring and Fall dinner meetings.

**QCWA - SOUTHEAST WISCONSIN CHAPTER #162**

Meets third Mon. monthly, 7:30 p.m., Around the Clock Restaurant, 3012 Rapids Drive, Racine.

**RACINE MEGACYCLE CLUB**

Second Mon., 7:30 p.m., Red Cross Bldg., 4521 Taylor Ave., Racine, WI

**RIVERLAND AMATEUR RADIO CLUB**

First Tue. - 7:00 p.m. - Onalaska Community Center, Onalaska WI.

**ROCK RIVER RADIO CLUB**

Monthly - first Tue. - 7:00 p.m. at Dodge County Sheriff's Department, 141 N. Main, Juneau, WI.

ARES Net: 146.04/146.64 Mon.s at 7:30 p.m. Sat.s on 7277 KHz at 10:30 a.m.

**SHEBOYGAN COUNTY AMATEUR RADIO CLUB**

Second Tue. - 7:00 p.m. - Sheboygan Red Cross/Boy Scout Bldg., 2032 Erie Ave.

**SOUTH MILWAUKEE AMATEUR RADIO CLUB**

First Wed. - Legion Post 434, Shepard Ave., Oak Creek WI. Auctions in March and October.

**TAYLOR COUNTY AREA AMATEUR RADIO CLUB (TCAARC)**  
**MEDFORD**

Usually the 1st Thur. of the month at 7:00 PM sharp. Usual location: emergency government meeting room/Red Cross office, basement of Sheriff's Annex to Taylor County Courthouse, 2nd and Ogden Sts., Medford, WI. Talk-in on 147.15 (+600) repeater. Amateurs & guests are welcome. ARES Net, Wed. nights at 8:30 PM on 147.15 (+600) repeater. For info contact: Mike Schoenfuss, N9GHZ, P.O. Box 401, Abbotsford, WI 54405, phone (715) 223-3996.

**TRI-COUNTY AMATEUR RADIO CLUB**

Meetings held at members homes. Usually monthly on Sunday afternoon. Contact: Glenn Eisenbrandt, (414) 563-6502 or John Saterlee, (414) 563-6381.

**WASHINGTON COUNTY AMATEUR RADIO CLUB**

Second Thursday, 7:30 p.m., Washington County Court House. Net on Thursdays at 7:30 p.m. on 146.73.

**WATERTOWN AMATEUR RADIO CLUB**

First Thur. of the month at 7:00 p.m., The Watertown Public Library, 100 S. Water St., Watertown, WI.

**WAUPACA AMATEUR RADIO CLUB**

First Sat. in March, June, September and December, at 9:30 a.m. at the Waupaca Fire Station in downtown Waupaca.

"CQ First Tue." - A social gathering and dutch treat luncheon at the King's Table in King, WI, on Highway QQ just south of highways 10 and 54 on the west side of Waupaca.

**WEST ALLIS RADIO AMATEUR CLUB**

Second Tue. - 8:00 p.m. - St. Peters Episcopal Church, 7929 Lincoln Ave. Entrance is at rear of building on alley.

**THE WINNEBAGO AMATEUR RADIO CLUB**

(Formerly the Oshkosh Amateur Radio Club)  
The Winnebago ARC welcomes all Amateurs and interested persons to join us at the Omro City Hall, on Webster Street. Meetings held the third Sunday each month, weather permitting. Talk in on 147.24 repeater.

For further information contact KB9IME, Dan Lenz, at (414) 233-7145.

**WISCONSIN ASSOCIATION OF REPEATERS**

Meetings are held Quarterly, with time and location to be announced. Repeater licensees, trustees, and sponsors are urged to attend W.A.R. meetings. All interested parties are welcome, as well.

**WISCONSIN VALLEY RADIO ASSOCIATION (WAUSAU)**

First Tue. - 7:30 p.m. - Location varies; info on 146.04/64, Wausau.

**YELLOW THUNDER AMATEUR RADIO CLUB (BARABOO)**

Days rotate: Scheduled meeting dates:

The following is the YTARC meeting schedule for 1994.

Sep. 15 ELECTIONS  
Oct. 18 ATV (amateur television).  
Nov. 16 Packet radio and computers.  
Dec. 15 CHRISTMAS PARTY

All meetings will be at the Baraboo Civic Center, room 14, unless otherwise noted. Starting time for the monthly club meeting is 7:30 p.m.. The program start time after the meeting is 8:00 p.m., with a one hour limit.

Let Badger State Smoke Signals know your club's meeting dates, and we will let our readers know of your meetings and activities. There may be Amateurs in your area interested in joining your club, or members of other clubs interested in making an interclub visit.

## The Test Point



### Amateur Radio Examination Locations and Schedules in the Wisconsin Area

The following are known locations where Amateur Radio license examinations are scheduled in the Badger State area.

September 3, 1994 Racine, WI  
September 10, 1994 Marshfield, WI  
September 10, 1994 Madison, WI  
September 10, 1994 Oak Creek, WI (MRAC)  
September 11, 1994 Dubuque, IA (Hamfest)

September 17, 1994 Milwaukee, WI (BE)  
September 17, 1994 Appleton, WI  
September 21, 1994 West Allis, WI (MRAC)  
September 24, 1994 Wauwatosa, WI (MRAC)  
September 24, 1994 Tomahawk, WI  
October 1, 1994 Racine, WI  
October 1, 1994 River Falls, WI  
October 8, 1994 Madison, WI  
October 8, 1994 Oak Creek, WI (MRAC)  
October 15, 1994 Milwaukee, WI (BE)  
October 23, 1994 Waukesha, WI (KMRA Hamfest)

October 19, 1994 West Allis, WI (MRAC)  
October 29, 1994 Wauwatosa, WI (MRAC)  
October 29, 1994 Marinette, WI  
October 29, 1994 Tomahawk, WI  
November 5, 1994 Adams, WI  
November 5, 1994 Menomonie, WI  
November 5, 1994 Racine, WI  
November 6, 1994 Kaukauna, WI (Hamfest)  
November 12, 1994 Madison, WI  
November 12, 1994 Oak Creek, WI (MRAC)

November 16, 1994 West Allis, WI (MRAC)  
November 19, 1994 Milwaukee, WI (BE)  
November 19, 1994 Dubuque, IA  
November 26, 1994 Wauwatosa, WI (MRAC)  
December 3, 1994 Stevens Point, WI  
December 3, 1994 River Falls, WI  
December 3, 1994 Racine, WI  
December 10, 1994 Marshfield, WI  
December 10, 1994 Madison, WI  
December 17, 1994 Milwaukee, WI (BE)  
December 21 1994 West Allis, WI (MRAC)  
Monthly, 1st Sat. Racine, WI (except January, July & August)  
Monthly, 2nd Sat. Madison, WI  
Monthly, 2nd Sat. Oak Creek, WI (SWAT/MRAC) (except June, July & August)  
Monthly, 3rd Wed. West Allis, WI (MRAC)  
Monthly, 3rd Sat. Loves Park, IL  
Monthly, Last Sat. Wauwatosa, WI (MRAC) (except December)  
Monthly, Last Sat. Tomahawk, WI (January thru October only)  
Quarterly Marshfield, WI (Second Saturday every third month.)

Many Swapfests/Hamfests offer exam sessions. If not shown above contact the sponsoring club in the Swapfest column on page 2.

The FCC now requires applicants to show their ORIGINAL AMATEUR LICENSE to the VEC. A copy of your license must be attached to your FCC form 610. You will also be required to have a photo ID, or other acceptable identification.

**GENERAL RULES****FOR MOST EXAMINATIONS:**

Be sure to check with sponsors in the event there are changes and/or errors in the dates or information given.

Most examinations require filing an FCC Form 610 and advance registration at least 30 days before the exam date. (Some VECs permit walk-ins. Check with sponsor.)

To register, you must first secure a copy of the current FCC Form 610 and fill it out completely (AND CORRECTLY). Get your form from an FCC Field Office, the ARRL or Badger State Smoke Signals. Send a 29¢ SASE if you request one from the ARRL or BSSS. In most cases, forms can also be obtained from the sponsoring group.

ARRL/VEC examinations require a check for \$5.75 payable to "ARRL/VEC".

The FCC now requires applicants to show their ORIGINAL AMATEUR LICENSE or CSCE to the VEC. You must also have two good copies of your license or CSCE. A copy of your license or CSCE must be attached to your FCC form 610 and most VEC want a copy for their records. You will also be required to have a photo ID, or other acceptable identification.

Technician class licensees must show proof of testing before March 21, 1987, in order to upgrade to General with a code test only.

Additional information is given below.

**MILWAUKEE RADIO AMATEURS' CLUB (MRAC/VEC)****OAK CREEK, WI (SWAT -MRAC/VEC)**

SECOND SATURDAY DATES: 1:00 p.m. at Wauwatosa Savings and Loan Branch, 6560 S. 27th St., Oak Creek, WI. (MRAC/VEC fee \$5.00)

THIRD WEDNESDAY DATES: At 6:30 p.m. at Park Manor, 3023 S 84th St., West Allis, WI.

LAST SATURDAY DATES (except December): 8:30 a.m. at 7500 W. State St., Wauwatosa S&L, lower level, Wauwatosa, WI.

For Additional Information Contact; Jack Krause, (414) 774-6999 or call (414) 466-HAMS (Answering Machine) or write MRAC, 1737 N. 116th St., Wauwatosa, WI 53226.

Bring along your ORIGINAL license, CSCE and two (2) good quality photocopies, plus two forms of identification, such a driver's license, etc. Also required is \$5.00 for the exam fee. WALK-INS are welcome. To register in advance, use a post card: print the grade of license you are applying for, and your name, address, and telephone number. Send the card to MRAC/VEC, c/o Jack Krause, W9JK, or Les Peterson, W9YCV at the addresses shown above.

**BADGER EXAMINERS (BE) - MILWAUKEE**

Unless otherwise noted, examinations are administered beginning at 9:00 a.m. to Noon, at (continued on page 14)

# Wisconsin Nets Association Ltd.

Art Evans, KA9KLZ, Secretary • 213 North Jefferson • Cuba City, WI 53807

## Section Manager's Notes



Richard R. Regent, K9GDF  
5003 South 26th Street  
Milwaukee, WI 53221

Implement club participation on October 15-16 for emergency communications readiness with the Simulated Emergency Test (contact your Emergency Coordinator) or host a local scout troop for Jamboree-On-The-Air (check with your local Boy Scout Council).

There are 9,355 amateurs in Wisconsin, which includes 2,474 of ARRL members. Please let your friends know about League membership benefits.

Kettle Moraine Radio Amateurs Swapfest on October 23 at Waukesha County Expo Center.

Badger Contesters and St. Croix Valley RAC are now ARRL affiliated.

Watertown ARC has 28 members.

AA9HL of Racine is new HF Awards Manager, can validate WAS and 5-Band WAS applications.

K9RRS of Racine is new VHF Awards Manager, can validate VUCC applications.

Anyone want to make a traffic training video?

Please let me know if you need a free list of 100 Wisconsin Nets.

Give the Wisconsin Novice Net (WNN) a try, it's on 3,723 kHz at 6:30 p.m. with Net Manager KA9FVX; a great place to make new friends, brush

## Wisconsin Nets

Net	WNA	Freq.	UTC	CDT	Mgr.
BWN	Yes	3985	1100	0600	W9AYK
BEN	Yes	3985	1700	1200	KE9VU
WSBN	Yes	3985	2230	1730	K9UTQ
WNN	Yes	3723	2300	1800	KA9FVX
WSSN	Yes	3645	2330	1830	N9BDL
WIN/E	Yes	3662	0000	1900	WB9ICH
WIN/L	Yes	3662	0300	2200	W9NGP
NWTN	Yes	34/94	2330	1830	NS9Q
(Rhinelander area)					
RCRA	No	01/61	2330	1830	KA9OMC
(Mondays CST) (Menomonie Area)					
Gr. Bay	No	72/12	0145	2045	WB9NRK
(Green Bay Area)					
ARES	No	4.65/5.25	0100	2000	
(South East/South Central Wisconsin)					
RACES	No	3993.5	1300	0800	WA9OAY
(LSB Sunday)					

up on CW, and learn about traffic handling.

Interested in becoming an ARRL Official Emergency Station (OES) and participate in public service and emergency communications? Ask our SEC, WB9SMM of Brookfield, or me, for an application.

Exams: October 1 River Falls, Racine; October 8 Madison, Oak Creek, Wauwatosa; October 15 Milwaukee; October 19 West Allis; October 29 Milwaukee, Marinette, Tomahawk.

Fox Cities ARC has 100 active members.

Thought for the month: *If Murphy's Law can go wrong, it will.* □

## Nets Will Be At Picnic

Would you like to learn more about traffic handling or message nets? Then be sure to visit the Wisconsin Nets Association Picnic. It will be September 17, 1994, at South Park in Waupaca (just south of the business district). Talk-in is on 146.52 MHz simplex or 147.39 MHz on the Waupaca repeater. Experts will be there as early as 10:30 a.m. to answer your questions. After a noon lunch (bring your own full picnic basket), there will be an interesting meeting followed by conversations until about 4 p.m.

Would you would like a free list of 100 nets? Let me know by mail or at a swapfest when you see

me. My address is 5003 South 26th Street, Milwaukee, WI 53221.

There is opportunity for you to help our nets:

1. Badger Emergency Net (BEN) could use a Net Control Station for Saturday and more liaisons to and from the 9th Region Net. Net Manager is KE9VU, address, city, state, zip.

2. Wisconsin Slow Speed (WSSN) needs a Net Control Station on Fridays. Let Net Manager N9BDL know if you can help at Route 1 7600 Highway D East, Lake Tomahawk, WI 54539.

3. Wisconsin Intrastate Net/Early (WIN/E) could use a few liaisons to and from the 9th Region Net. Net Manager is WB9ICH, 706 West Jennings, New London, WI 54961.

- Rich Regent, K9GDF

## FCC Garners Auction Award

The Federal Communications Commission's "Auction Team" has received the Hammer Award "for reinventing government initiatives."

The Commission said that the award recognized that the auctions (which were for narrowband Personal Communication Service spectrum and interactive video allocations) served consumers by licensing new services faster, served the public by selling rights to the spectrum rather than giving it away, and served industry by getting licenses to those "who value them most highly."

The FCC Auction Team includes employees who worked on allocation and auction rule making as well as the team that organized and carried out the actual auctions in late July.

After 47 rounds of bidding, the PCS auction earned more than 600 million dollars for the ten

nationwide licenses being auctioned. An interactive video spectrum auction earned an additional 214 million dollars for 574 licenses that will be used for new broadcast services.

Vice President Al Gore made the award presentation. He said "Small and independent (government) agencies have been leaders of reinventing government. At the FCC, which has less than 2,000 employees, reinvention efforts have moved the agency from red tape to real results. Employees of the Commission have set a new standard for government performance, putting their customers, the American people, first," Gore said.

- ARRL Bulletin ARLB066, 8/10/94

*Editor's note: The auction involved part of ONE amateur band, 13cm, which will now be shared with private users, not government users, according to John Hennessey at ARRL Headquarters.* □

## HARP-2 Balloon Flight

Continued from front page

package gone higher, it would have experienced temps of -60 or more!!

Because the lift was light, the package hovered around a long time, about 5 hours or so. It floated over Lowell, WI, and stayed there most of the time. We could tell that because our beam headings were strongest directly over head!

At about 2:30 p.m., the telemetry beacon told us that the external temperature was +72 degrees F! We knew it was coming down fast. We followed the directions indicated by our radio direction finding equipment and drove closer to the landing sight. Brad and Kevin were closest to it. I took one more beam heading and drove right by it! Brad and Kevin were right behind me, and spotted it across the highway in a tree. Daniel, N9TOR, was right behind them. We all parked as close as we could get, and Dave, N9LTD, Daniel, N9TOR, and Steve, WB9ZRE, went through the swamp and retrieved the equipment from the tree. No damage at all!!

Dave quickly took the film to get developed, and by 5:30 p.m., we were looking at some really fine high altitude pictures! All in all, a good flight and a good time was had by all.

I would like to thank the following people for their participation:

Dave, N9LTD, for his work on the on-board computer, the 35mm camera, and the temperature telemetry.

Pete, AA9AD, for supplying the cross band repeater equipment and making sure it worked properly.

Jim, N9KAN, for putting the package together, painting gluing and soldering, and testing.

All 3 of us put a lot of time into this package.

Thanks to Theresa, N9SZB for the fine job of sewing the parachute, and to Len, N9QIP, for letting us launch from his farm. Those who were present at the launch site included: Dave, N9LTD; Jim, N9KAN; Dave, KA9NHL; Brad, WB9WHI; Kevin, WB9YHB; Jim, N9LKY; Dave, KE9XN; Kevin, KF9AQ; and Len, N9QIP.

Thanks to Paul, KA9WAM, for running the net on the balloon repeater.

The RDF crew was: Pete, AA9AD, Brad and Kevin, Jim, N9KAN; Daniel, N9TOR; Steve, WB9ZRE; and Dave, N9LTD.

And, thanks to everyone else I forgot to mention. Without the help of these people, projects like this would not happen.

Thanks as well to everyone who took time to check into the balloon net. It's good to hear people taking an interest in these kinds of projects.

The next scheduled balloon flight for HARP is Saturday, September 17, 1994. Rain day will be Sunday September 18. This project will be called HARP-3 and be similar to HARP-2.

The Near Space Sciences group will be launching a GPS/Packet flight on Saturday, August 27, 1994. Watch for more details on this one.

Catch you later!

73.

Jim Kalrath, N9KAN  
Southern Wisconsin Repeater Group  
N9KAN Radio Network

You can order pictures from this flight. Just listen to the "This Week in Amateur Radio" net on 443.400 MHz, 443.675 MHz, or 53.090 MHz on Sunday nights at 9:00 PM. Pictures are \$5.00 for a set of 18. \$10.00 for all 36 pictures. Let me know! (Badger State Smoke Signals assumes no liability for photos ordered.) □

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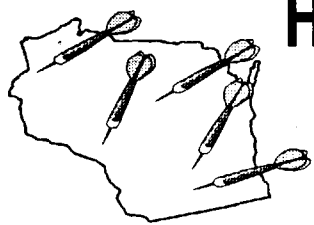
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## HERE and THERE

### FCC Plans to Reorganize

The FCC has proposed to reorganize several of its bureaus and offices. A new Wireless Telecommunications Bureau is to have as a co-deputy chief Ralph Haller, who currently is chief of the Private Radio Bureau and is well known to amateurs.

Richard M. Smith, now head of the Field Operations Bureau, is to be chief of a new Office of Engineering and Technology.

Beverly Baker, who is now deputy chief of the Private Radio Bureau, is to become chief of the Field Operations Bureau.

FCC Chairman Reed Hundt said, in announcing the proposed reorganization, that wireless and international were the areas calling for the "biggest changes." He said that personal communications systems and other emerging technologies made a Wireless Bureau necessary.

Hundt said that an International Bureau "will better meet the challenges ahead as the FCC continues its role in international telecommunications, working with the Department of State and National Telecommunications and Information Administration (NTIA) in the promotion of the Global Information Infrastructure."

Scott Blake Harris is to be chief of the new International Bureau. He currently is the chief of the Office of International Communications.

The reorganization will become effective when formal Commission and Congressional approval has been obtained, as well as approval of the labor union representing FCC employees.

- ARRL Bulletin ARLB065, 8/4/94

### Marconi Widow Dies

The widow of Guglielmo Marconi has died. The Marchesa M. Cristina Bezzi Scali died July 15, 1994, at age 94.

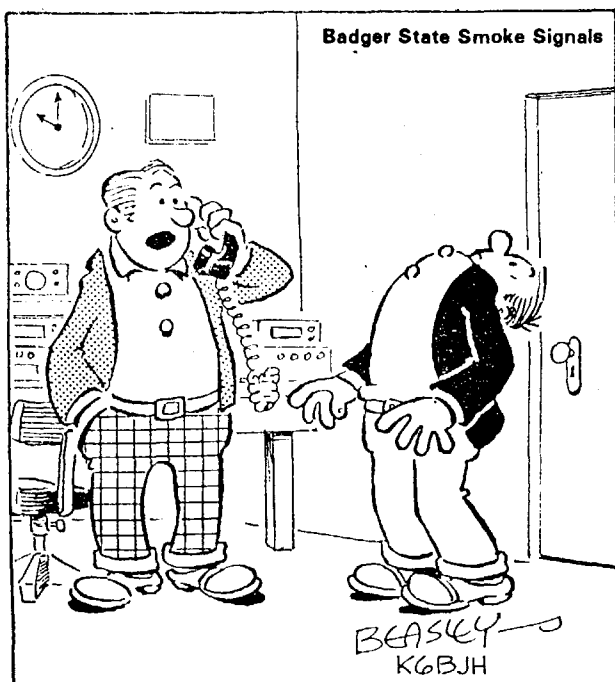
The two were married in 1927. Marconi lived another 10 years, dying in 1937 at age 63.

The couple had a daughter, Elettra, who was baptized by Cardinal Eugeni Pacelli, who would later become Pope Pius XII. Elettra's godmother was Elena di Savoia, queen of Italy.

According to Pat Ciancarini, IØKHP, Elettra will continue the family's work in preparing for "1995, Year of Guglielmo Marconi," the centennial celebration of Marconi's first wireless telegraph.

The funeral was held July 18. Among those attending were several bishops from the Sovereign Military Order of Malta.

- ARRL Bulletin ARLX023, 8/3/94



MEG? I'LL HAVE TO DRIVE GEORGE HOME MYSELF--- HE'S BEEN STANDING OUTSIDE STARING UP AT MY NEW 175 FOOT TOWER

### Eighty on Forty!

WA9OKB, Anton, of Milwaukee, is an Extra class, has been licensed for 30 years and particularly enjoys 40 meter CW. Anton is an active amateur and attends many swapfests; you'd never know he is 80 years old.

- Rich Regent, K9GDF

### One Family Has Three Extras

The Pedersen family, of Juneau, WI, has completed the Extra class code tests to add to their Extra class written test certifications in three consecutive months. K9FHI, Roy, licensed for 33 years, his XYL, KA9BAC, Beryl, and his son KA9BAE, Gary, both licensed 16 years are now all Extra Class amateurs. The other son (N9QMV, Mike) is a Technician class, licensed for two years, and the family is encouraging him to upgrade. Roy is our ARRL Assistant Section Manager and Affiliated Club Coordinator. The Pedersens are active in the Rock River Radio Club and can be found at many swapfests promoting Amateur Radio and the ARRL.

Congratulations to all, and listen for them in the Extra portion of the bands.

- Rich Regent, K9GDF

### Piled Higher and Deeper

WA9JMO, Larry McCalvy, of Racine, loves learning. Larry has college degrees from U.W. - Milwaukee, including a Master of Science degree in Education/Psychology, and is just finishing his PhD thesis at Marquette in Education Foundations.

Congratulations, Larry!

- Rich Regent, K9GDF

### No Mistrakes Please

"What common mistakes do license candidates make when filling out the FCC Form-610?" I asked Volunteer Examiner KB9QL, Norm, of Oak Creek. Norm chuckles, "Putting today's date in the birth date entry box. I ask them 'Were you just born today!?' Another is entering a post office box in the address box, but then not describing directions to the transmitter location. There must be a transmitter location." Norm's got one good suggestion, "Think first, before you fill out your form." After all, there aren't many amateurs who have their rigs in a post office box.

- Rich Regent, K9GDF

### Wisconsin QRP Newsletter

QRP is having fun by making contacts using transmitters running 5 watts or less. Wisconsin has a QRP group which you may contact for QRP information by writing to P.O. Box 111, Brandon, WI 53919-0111. If you would like to be a *WIQRP Newsletter* subscriber, or submit some articles about your QRP activities, then write to Tom Mitchell, KC3YD, W6392 Oakwood Drive, Fond du Lac, WI 54937. Thanks to W9BCV for providing the facts for this story.

- Rich Regent, K9GDF

### Didja Know??

Every new ham in Wisconsin receives a sample copy of *Badger State Smoke Signals*.

## FAR Scholarship Winners Named

### West Allis, South Milwaukee Clubs Give \$5,000 for Education; Menomonie Amateur Wins \$1,000

The Foundation for Amateur Radio, Inc. is pleased to announce the 1994 winners for the fifty scholarships which it administers.

**WARAC MEMORIAL SCHOLARSHIPS:** Sponsored by the West Allis Radio Amateur Club, winners were Robert J. Goemans, N9HAD, of Madison, and Karen M. Schneider, N9SVA, of Appleton. A third WARAC scholarship, in memory of Marvin H. Rutishauser, WB9PKL, was awarded to Amy L. Tlachac, N9TLN, of Wisconsin Rapids. These scholarships were \$1000 each.

**SOUTH MILWAUKEE AMATEUR RADIO CLUB SCHOLARSHIPS:** These scholarships, at \$500 each, were awarded to Timothy J. Czerwinka, WO9U, Madison; Bernard A. Doehner, NU1S, Stevens Point; Jason G. Maxham, N9VAX, Appleton, and Stephen D. Miller, KB9DFE, of Spooner.

The Richard G. Chichester Memorial Scholarship, at \$1000, sponsored by Patricia and Jack Chichester (W9AMF), was given to Steven D. Kraft, KE9RW, of Menomonie.

These scholarships were open to all Radio Amateurs meeting the qualifications and residence requirements of the various sponsors. The Foundation is a non-profit organization, incorporated in the District of Columbia, representing more than fifty clubs in Maryland, the District of Columbia, and Northern Virginia. It is devoted exclusively to the scientific, literary, and education pursuits that advance the purposes of the Amateur Radio Service.

Announcement of our 1995 awards will appear in the March or April issues of the major Amateur Radio publications and radio club newsletters.

- Condensed from FAR news release

## Silent Key

**MADISON - Paul A. Holloway, K9VRI,** born March 6, 1910 in Goshen, Indiana, died July 3, 1994 at a local hospital.

He retired in 1970 after a long career as an engineer with the Federal Communications Commission, which included working at the Commission's Chicago Field Office.

He ran a small business, mastered computers, and did a great deal of volunteer work. The family requests that memorials be made to the Central Wisconsin Center Service Auxiliary.

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September 1994



## The Computer Corner

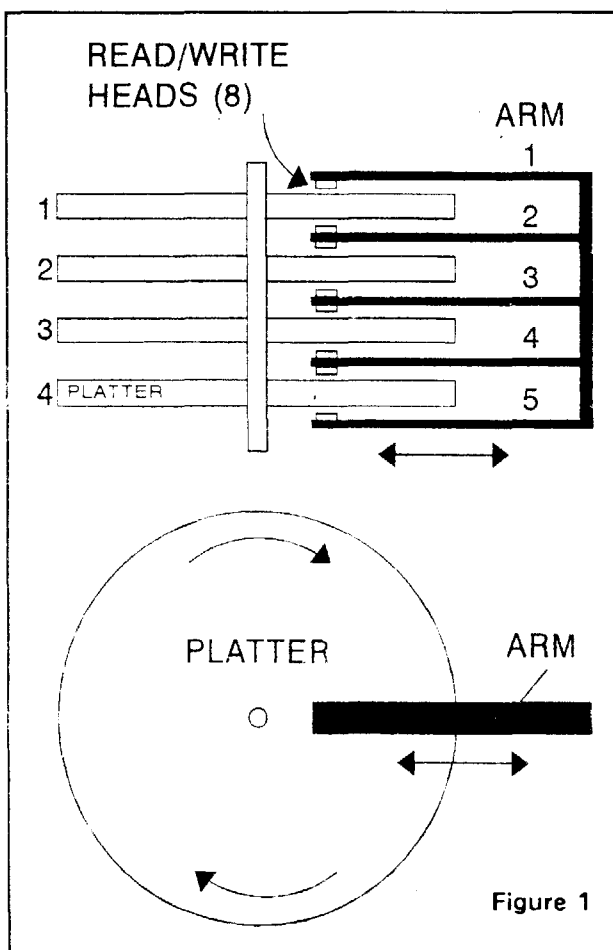
By Stan Kaplan, WB9RQR  
11541 North Laguna Drive  
Mequon, WI 53092-3119

### THE COMPUTER CORNER #14: A GOOD ONE IS NOT HARD TO FIND

By Stan Kaplan, WB9RQR  
11541 North Laguna Drive  
Mequon, WI 53092

Of course, this title's twist on Mae West's famous comment describes that marvel of modern technology, the hard drive, also known as a fixed disk or Winchester drive (the latter title was given to it when the first model, a 3030, reminded someone of the famous 30-30 rifle of the early west). Although these gadgets are simple in concept, they just have to be about the most complex mass-produced mechanical/electronic device in history. I am truly amazed that they even work, let alone reliably. But they do work, and very reliably, too (unless you have failed to back up your data, in which case the gremlin that lives in each hard drive notices that fact and quickly causes a non-recoverable crash). Let's see if I can tell you how they work, for those who have never opened the case of a defunct hard drive. (You should, if you get the opportunity; it's a good learning experience. But make sure it is really no good. If in doubt, give it to me to check out; I will be glad to trade you a junker to open!)

Imagine an old jukebox that plays records. Remember those antiques? There was a stack of records in view, and when you put in your coin, a mechanical arm would remove your selection from the stack and drop it on the turntable. Another mechanical arm holding a needle would then move



over the rotating platter and gently lower itself until the needle settled into the groove. Voila, music!

The hard drive is not too much different. A stack of several platters, each about the size of a 45 rpm record or a little smaller, and each separated from its neighbor by perhaps 1/4 inch, spin constantly (but at around 3,600 rpm). A mechanical arm moves between each pair of platters. Each arm holds two tiny read/write heads, one of which floats near the platter above the arm, and the other of which floats near the platter below the arm. That means, if your hard drive has four platters, there are 5 arms holding 8 heads, as is shown in the diagram (see figure 1). Sometimes the published drive specifications show it has one less head than

it should (7 heads for four platters, for example). That is because one platter surface is sometimes set aside to hold head positioning data that the controller uses to move around the drive. So the head is really there, but it is not usable by you to hold your data.

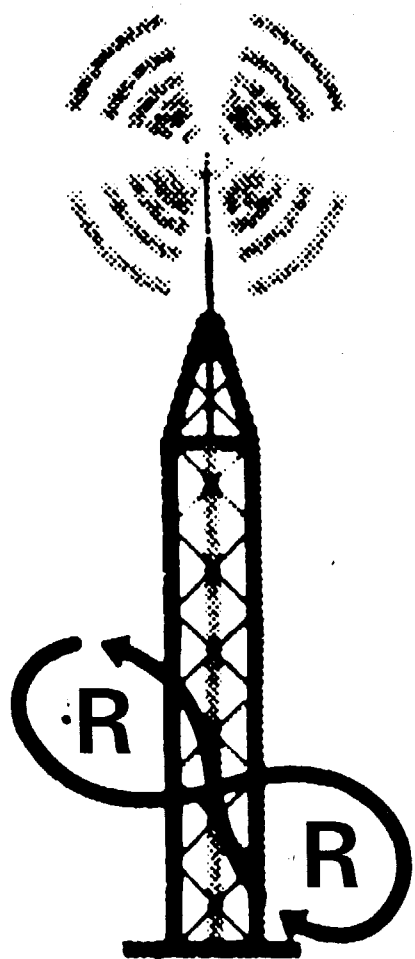
There are marked differences, though, between the way the needle gets "data" from a phonograph record and the way the read/write heads get data from (or write data to) the hard drive. First, the read/write heads do not normally contact the platters. If they do, it is called a "head crash" and the platter surface is most certainly damaged where contact was made. Normally, the heads float on a cushion of air a few micrometers above the platter. I have seen the analogy that the spaces involved are akin to a 747 jet plane flying 6 inches off the ground! That is why the smallest speck of dust inside a hard drive housing can wreak havoc if it comes between a head and a platter; the speck of dust is like a 3 foot boulder lying on the ground when the 747 goes by. It can simultaneously damage both the head (the 747) and the platter (the ground below). Hard drive housings must never be opened, or the "ground" will be strewn with boulders. They are manufactured in a special clean-room where dust particles are not present.

Another difference concerns the tracks of data on a hard drive platter and a phonograph record's groove. A phonograph track is also spiral; that is why the arm and needle wind up near the center of the record when it has finished playing. On a hard drive, the tracks are not spiral; they are circular. The word "track" has even fallen out of use when referring to hard drives, probably partly because it might be taken to mean a spiral pattern (though the term is still in use when referring to floppies). The newer (and more descriptive) word is cylinder. A typical 20 Megabyte hard drive will have two platters, four heads (held by 3 arms) and 615 cylinders. I just checked a large hard drive database

*Continued on page 9*

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# Field Day 1994: Emergency Exercise, Contest, Socializing = Great Fun!

## West Allis Radio Amateur Club

Weatherwise, Field Day 1994 was like Camelot - beautiful sunny days with the rain occurring only during the night. But with that rain came thunderstorms and QRN that reduced 75 meters to useless noise. Forty meters suffered from this also, but 15 meters tried to make up for it by opening up nicely on Sunday morning.

WARAC operated in the 2A class (two stations running on emergency power) plus a third Novice and VHF station. The 1994 operation was once again located at Crystal Ridge ski hill in the south end of Milwaukee County near 76 St. and Rawson Ave., which is a pretty quiet place in June.

Mike Bauer, NS9J, was band head for the 40

Band/Mode	Contacts
80 CW	
75 SSB	27
40 CW	
40 SSB	
20 SSB	429
15 CW	
15 SSB	150
10 Novice	245
6 Phone	75
2 Phone	30
<b>TOTAL</b>	<b>1108</b>

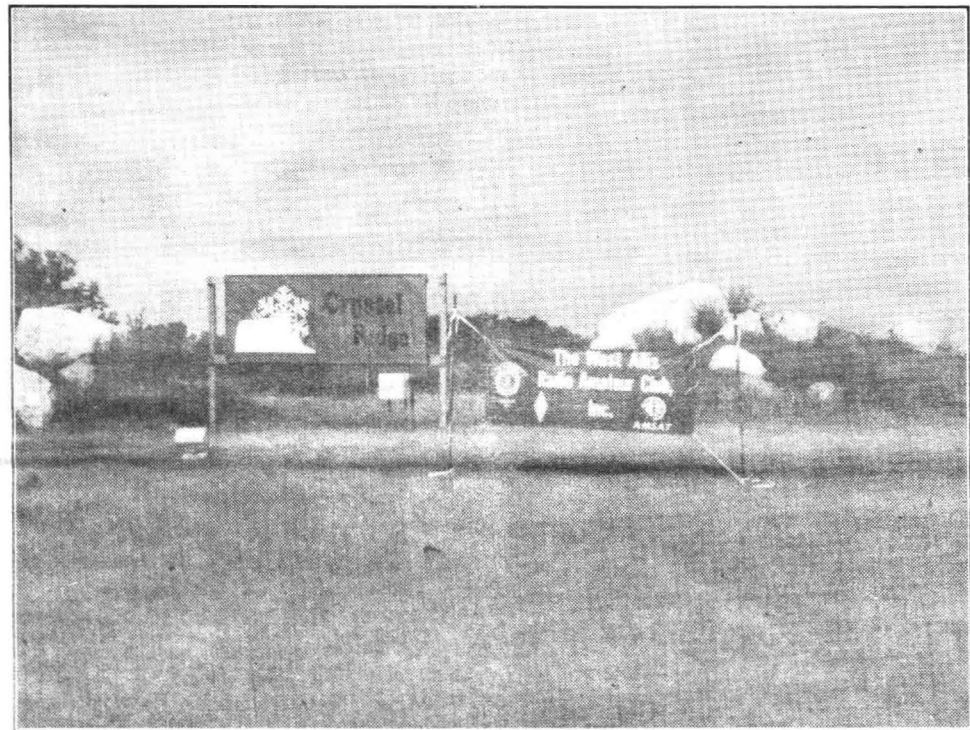
meter/CW station, which used triple inverted V's for 80, 40 and 20 meters, fed with a common feed line. The 20/75 SSB station, headed by Ron Hooker, K9WTF, used a DAP rotatable dipole at about 35 feet and an inverted V for 75 meters (which didn't get a whole lot of use). The Novice/VHF station sported two 35 foot poles, one with a 3 element 10 meter beam for Novice use and stacked 6 meter and 2 meter beams on the other. This station was overseen by Phil Gural, W9NAW.

The results are not all in yet, but some unofficial numbers are in the table in the center column.

Hats off to everyone who operated the Novice station! They obviously did very well.

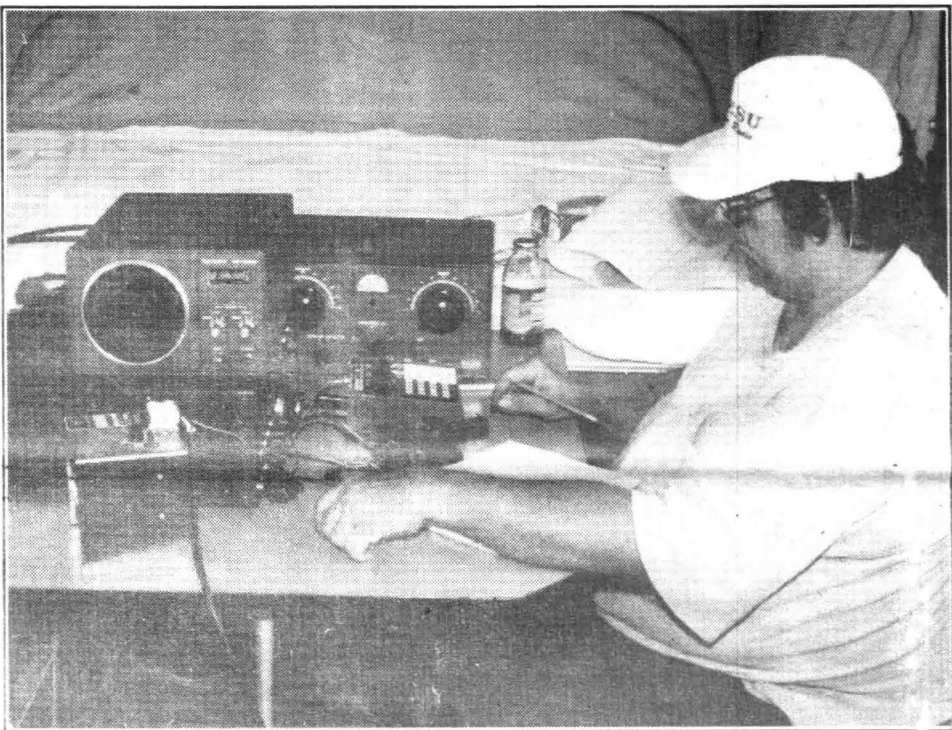
Thanks also to all those who came out to help set up and take down as well as to all the operators. All in all it was a safe and satisfying Field Day - we had fun!

- Tom Macon, K9BTQ



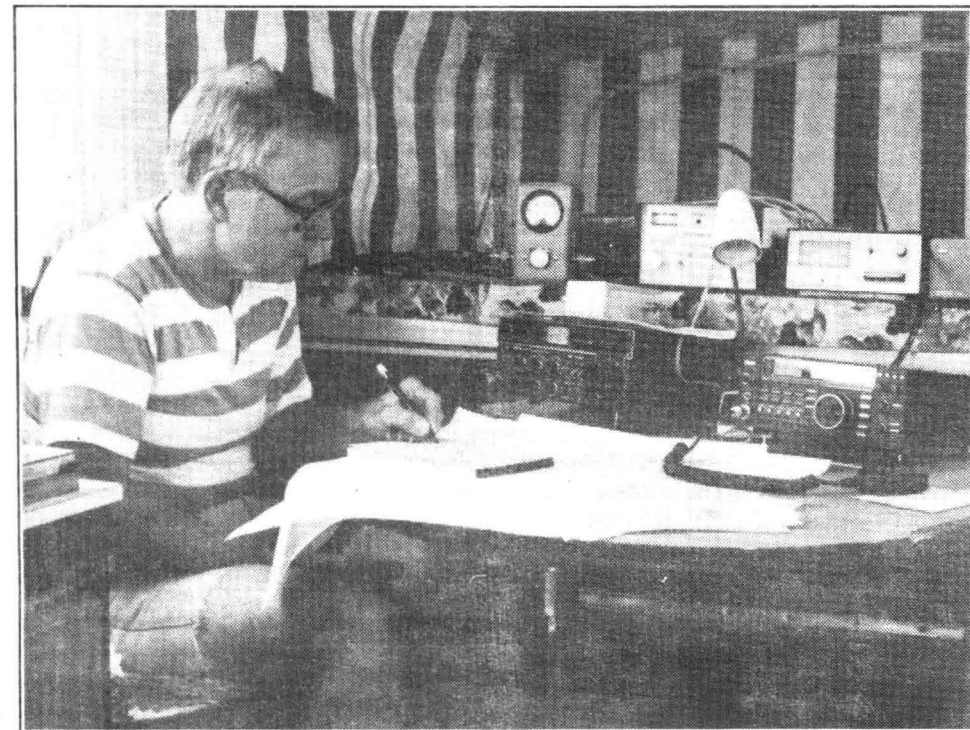
The West Allis Radio Amateur Club uses its new banner to mark the site of Field Day activities for the benefit of visitors.

- Photo courtesy of Les Peterson/W9YCV



Mike Povlich, WB9HGS, goes after the CW contacts at the W9FK 40 meter station. Mike Bauer, NS9J, and Jim White, WB9YCS, (both not shown) provided most of the SSB contacts.

- Photo courtesy of Les Peterson/W9YCV



Phil Gural, W9NAW, takes advantage of the six meter opening at the W9FK VHF station.

- Photo courtesy of Les Peterson/W9YCV



(L to R) Tom Macon, K9BTQ, makes the Field Day contacts on 20 meter SSB while Ron Hooker, K9WTF, computer logs the contacts. Lynn Tamblyn, K9KR, the other member of this team was on break.

- Photo courtesy of Les Peterson/W9YCV

## Rib Mountain "Weather Eye" Announcement was Premature

"Weather Eye ATV," (page 5, August BSSS) was partly in error. All of the components are on hand and assembly is underway, but the device has not

yet been integrated into the Rib Mountain 421.25 MHz ATV system. Paul Nelles, K9DB, tells K9GDF that BSSS will be sent a detailed story when the optical weather observatory begins service.

- Thanks Paul Nelles, K9DB, and Rich Regent, K9GDF

## More Field Day Photos Next Month

If you submitted photos of your club's or group's 1994 Field Day operation for publication, and if you don't see them in this issue, fear not! We'll print more in our October issue.



## Fantastic Fun, Furious Fireworks

# Yellow Thunder Amateur Radio Club

Well, we made it through another Field Day without any casualties. Needless to say, it wasn't without excitement, though.

Our thoughts of going for the big 1,000 contacts were spoiled by Mother Nature this year. About eight hours into the contest, we were threatened with severe thunderstorms that had a rating of 25 or 30 on the Richter scale or something. At least, that's what I thought K9ZZ (Jim Romelfanger) was frantically yelling at everyone. I could be mistaken, though, with all the confusion going on. So, we proceeded to take down the 30-foot tower and the various wire antennas we had erected earlier in the day, in case of big thunderbolts. (The club's site is right on top of a nice, big hill, Bob - K9ZZ.)

So much for the non-stop radio contesting that I was psyched up for. The big one didn't last long, only about a half hour. I was in no mood to be putting up towers again, so we just put the antennas back up on N9KXX's crankup tower that he supplied. They still worked just fine without any tuning. The storm passed, but left us with a lot of lightning in the area. We decided to shut it down until the fireworks display left the area. At least most of us did anyway. There were the few that braved the electrical flashes to continue making

contacts on the 10-meter band, due to its being open. You gotta go for it when it's there cuz of this sunspot thing, you know!

Many contacts were made on ten in between the lightning strikes and the 60 MPH winds that kept our hair nicely slicked back. Of course, we had our liquid bravery along with us in order to convince ourselves that we weren't *really* insane, if you know what I mean.

We continued to monitor the weather channel (on ATV from Madison) and the weather net on 146.88 just to make sure we weren't imagining anything out of the ordinary. Sure enough, we saw where we were in relation to this big honker of a storm, right smack dab in the middle of it! Now, if that isn't great for easing your mind and the XYL, who thinks *I'm* crazy for staying up all night in the middle of a field to dit and dah myself to no end anyway?

About midnight, we decided that enough was enough and packed it up for good. WT9Q (Bob Sauvan), WB9RNL (Steve Schwoegler), N9UDO (Steve Schulze), KA9QFJ (Bill Hommel), and WD9JIB (Pete Sweeney) retired to our portable hotels to go back at it in the morning when conditions got better. KA9HKL (Duane Grotophorst) had already retired to the front seat of his car. He must have had one of those easy chairs in there, I guess.

Morning came with the birds justa singin' and the sun justa shinin'. A beautiful day for Field Day. I got back to it at 6:30 a.m. and rattled off about a hundred CW contacts before everybody got out of bed. We all finally got back on track with our

bed. We all finally got back on track with our contacts to get to our goal that, by now, was next to impossible to achieve, but still having high hopes.

A couple of hours later, the others who had left early in the night started to filter in to give us the moral support we needed after braving that humungo storm that left us almost as quickly as it had visited us. According to my log, I had just lost 10 1/2 hours of operating time that there would be no way in the whole universe to catch up on, no way, no how!

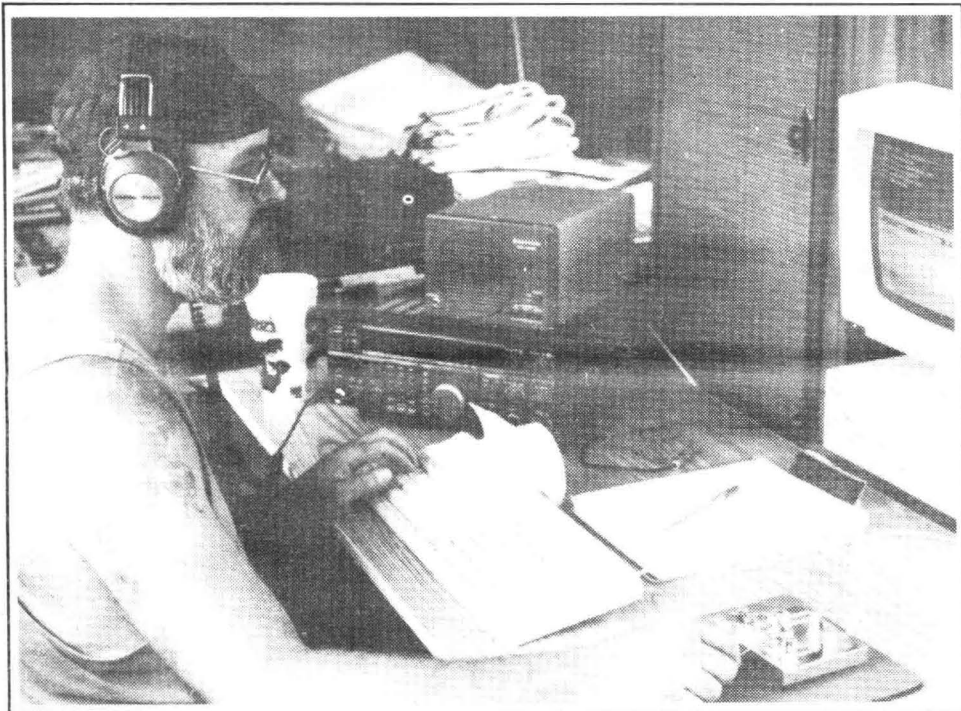
WB9RNL's homebrew delta loop for 15 meters was looking grim about now. Sagging to the ground and no longer putting out a horizontally polarized signal. Needless to say, I took advantage of all the time I had left to operate.

Well, I guess there is always next year, with hopes of doing it all over. Maybe Mother Nature will be a little nicer to us. Aside from all of the distractions, we still had a great time. I managed to squeeze 400 CW contacts, WB9RNL had about 250 on SSB, and a hundred or so between the others to put us in one of the lower scoring spots, HI.

I would like to thank everyone who came to operate and give a helping hand to the excitement that we had this year in Field Day, and hope to see you all again next year in hopes of better conditions for the event.

73 for now and good luck.

Robert Sauvan, WT9Q  
President, YTARC



Bob Sauvan, WT9Q, belts out the Charley Whiskey contacts at about 50 WPM from WB9FDZ/9. He's the YTARC prez, and he wrote the story above.



Steve Schwoegler, WB9RNL, yaks up the YTARC QSO tally. He gets the joyful chore of deciphering the logs and sending the stuff to the ARRL.

## Open House is Sure to Spark Your Interest

Resonance Research, a Baraboo area manufacturer of "industrial strength" monster Tesla coils, Van de Graaff generators and other spectacular electrostatic items, will hold an open house on Tuesday evening, September 27, 1994, at its manufacturing facility between Baraboo and Wisconsin Dells.

D.C. Cox, owner of Resonance Research, is a widely-known expert on these devices, and his company has made dozens of very large Tesla coils for use in college and other research programs, in motion pictures, as well as for the famous Tommy Bartlett Robot World and Exploratory in Wisconsin Dells.

Some of the coils made at RR are capable of generating twelve-foot-long bolts of artificial "lightning."

The facility is on the north side of Shady Lane Road, about four blocks east of Sauk County Trunk Highway A, just about halfway between Baraboo and Wisconsin Dells. At its Baraboo end, County A is also named East Street, and a turn to the north there (at a set of traffic lights) will head you in the right direction. There is no County A exit on I-90/94.

The open house will run from 7 to 9 p.m. Everyone is welcome to attend and enjoy the show.

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KEN HUTLER



# THE ANTENNASCOPE REVISITED

By L. Bruce Bjerstedt, K9CUT  
335 South 22nd, La Crosse, WI 54601

This year at Field Day, Nook Bentzen, K9EGO, used an Antennascope to tune up an end-fed antenna. He ran the antenna from the trailer to over a high sign. Many other Hams asked how he got the right dip and frequency. Due to the interest in the antennascope, I dug out old articles and have put this information together to benefit other hams who were interested in trying to build one. I give credit to an old *ARRL handbook* and also to the *Radio Handbook* by Wm. Orr, W6SAI. Have fun!

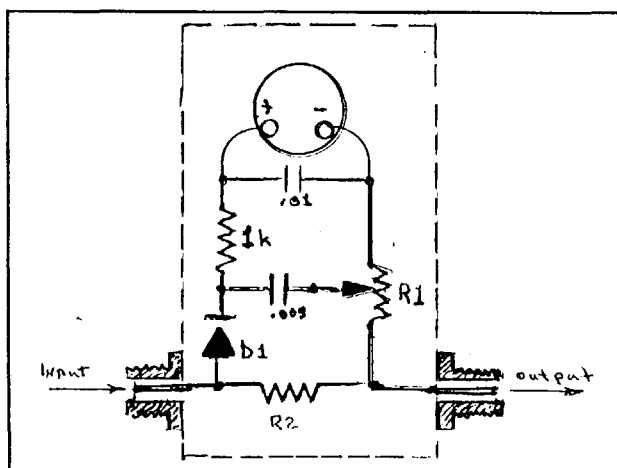
## WHAT IS AN ANTENNASCOPE?

The Antennascope is an modified SWR bridge, in which one leg of the bridge is composed of a non-inductive variable resistor. This resistor is calibrated in ohms, and when its setting is equal to the radiation resistance of the antenna under test, the bridge is in a balanced state. If a sensitive voltmeter is connected across the bridge, it will indicate a voltage null at the bridge balance. The radiation resistance may then be read directly from the calibrated resistor of the instrument. When the antenna under test is in a non-resonant or non-reactive state, the null indication on the meter will be incomplete. The frequency of the exciting signal must be moved to the resonant frequency of the antenna to obtain an accurate reading of the radiation resistance from the dial of the instrument.

Look at the attached drawing of a typical antennascope. A 1000 ohm non-inductive carbon potentiometer serves as the variable leg of the bridge. The other legs are composed of the 50 ohm composition resistor and the radiation resistance of the antenna. If the radiation resistance of the external load or antenna is 50 ohms and the potentiometer is set at mid scale, the bridge is then in balance and the diode voltmeter will read zero. If the radiation resistance is any value other than 50 ohms, the bridge may be balanced to this new value by adjusting the position of the potentiometer. Bridge balance may be obtained with non-reactive loads in the range of 5 to 1000 ohms with this simple circuit. When measurements are conducted at the resonant frequency of the antenna system, the radiation resistance may be directly read from the calibrated dial of the Antennascope. Conversely, a null reading of the instrument will occur at the resonant frequency, which may be easily found with the aid of a calibrated receiver or frequency meter.

## CONSTRUCTION OF THE ANTENNASCOPE

The Antennascope can be built in a sheet metal case measuring 3" x 6" x 2". The indicating meter



Antennascope

is placed at the top of the case, and the RF bridge occupies the lower portion of the case. The input and output co-axial fittings are mounted on each side of the case, and the 50 ohm resistor is soldered between the center terminals of the receptacles.

The calibrating potentiometer (R1) is mounted on a phenolic plate placed over a 3/4" hole drilled in front of the box. This is to reduce the capacity to ground of the potentiometer to a minimum. Care should be given to mount the crystal diode at right angles to the 50 ohm resistor to reduce capacitive coupling of the components.

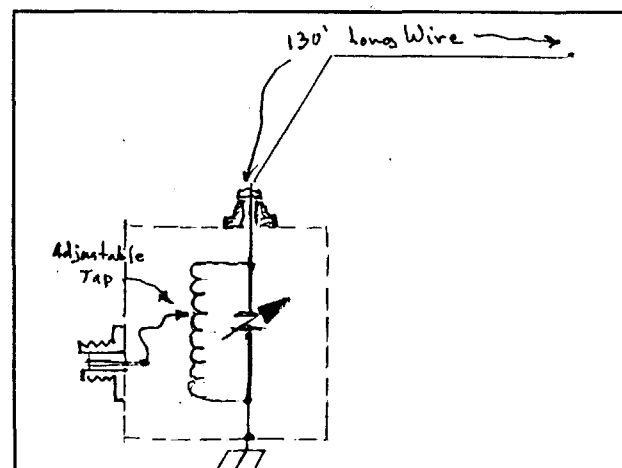
The upper frequency limit of accuracy of the Antennascope is determined by the assembly technique. The unit described will work with good accuracy up to about 100 MHz. Above this frequency, the self-inductance of the leads prevents a perfect null from being obtained. For the VHF region, it would be wise to rearrange the components to keep lead length at an absolute minimum and to use 1/4" copper strap for RF leads instead of wire.

## TESTING THE ANTENNASCOPE

When the instrument is completed, a grid dip meter may be coupled to the input receptacle by means of a two-turn coil link. The frequency of excitation should be in the area of 10-20 MHz. Coupling should be adjusted to obtain a half scale reading of the meter. Various values of 1 watt composition resistors up to 1000 Ohms are then plugged into the output receptacle, and the potentiometer adjusted for a null on the meter. The settings may now be calibrated in terms of the load resistor. The null indicating the value of the resistor. A calibrated scale should now be made for the potentiometer.

## USING THE ANTENNASCOPE

The antennascope may be driven by a grid dip



Antenna Tuner "L" Network

meter oscillator coupled to it through a two-turn coil link. Enough coupling should be used to obtain at least a 3/4 reading on the meter of the Antennascope with no load connected to the measuring terminals. The Antennascope may be considered as a low range RF ohmmeter, and may be employed to determine the electrical length of quarter wave lines, antenna resonance, and radiation resistance.

In general, the measuring terminals of the Antennascope are connected in series with the load of maximum current; this means at the center of a dipole, or base of a vertical 1/4 wave ground plane antenna. Excitation is supplied to the Antennascope, and the frequency and resistance of the Antennascope are both varied until a complete null is obtained on the indicating meter of the Antennascope. The frequency of the source is now the resonant frequency of the load and the radiation resistance is now read directly upon the dial of the Antennascope.

On measurements on 80 and 40 meters, it might be found that it is impossible to obtain a complete null on the Antennascope. This is usually caused by pickup from a nearby broadcast station, the rectified signal of the broadcast station obscuring the null reading of the Antennascope. This action is only noticed when antennas of large size are being checked. □

## ANTENNASCOPE COMPONENTS

- R1 1000Ω composition potentiometer (Ohmite type AB or Allen Bradley Type J, Linear taper)
- R2 50Ω 1 Watt composition resistor, IRC Type BT or Ohmite "Little Devil" (see text)
- R3 1000 Ohm, 1 Watt resistor
- M 0-200 microamp meter
- D1 1N34 diode
- C1 .01 μ F 1000 volt disk capacitor
- C2 .005 μ F 1000 volt disk capacitor

## The Computer Corner

Continued from page 6

and found 41 different drives with those specifications, including the famous Seagate ST225. Each cylinder is further subdivided into short arc-shaped sectors. A 20 Meg drive will typically have 17 sectors per cylinder. Each sector holds 512 bytes of data. Now let's do some arithmetic: 4 heads X 615 cylinders X 17 sectors X 512 bytes. My calculator comes up with 21,411,840. If I divide that number by 1024 (there are 1,024 bytes in a kilobyte, not an even 1,000), my calculator says 20,910k. That translates into 20.910 Mbytes, rounded to 21 Mbytes. Yep, it works out just right.

There you have it. From a mechanical standpoint, a hard drive is a glorified stack of phonograph records, with circular (not spiral) magnetic "grooves". Ah, but the electronics to read from, write to, and control the drive - that's another matter; very complex, indeed. Amazing that it all works so well! Happy computing. □

Reprinted, by permission, from the ORC Newsletter, Ozaukee Radio Club, P.O. Box 13, Port Washington, Wisconsin 53074 (Ray Meyer, N9PBY, Editor). □

## Taking Two Meters Out With the Garbage

By Rich Regent, K9GDF

5003 South 26th Street, Milwaukee, WI 53221

Fox Hunts with the Fox Cities ARC are always special events, and each time they get trickier. KP9CS, Mark of Appleton, thought long and hard to challenge participants of a recent fox hunt - he put his hidden transmitter inside a residential two-wheel garbage cart at the curb!

It is the day before the City pickup and there are garbage carts in front of most homes in the block. Mark carefully configured his Icom 02AT two-meter hand-held transceiver with an RS digital signal processor, 555 integrated chip timer, 12-volt Gel Cell power source and TV-lead J-pole antenna. The system sends for 16 seconds, and repeats after 50 seconds. First, Mark loads the electronics in a cardboard box and places it at the bottom of the cart. Mark next packs two bags of crumpled newspapers, then camouflages the antenna on the back of the cart with black electrical tape. Everything is ready and remotely controlled.

Oops, the first two transmissions can't be heard by the foxes. Mark scurries to the hidden transmitter, takes out the bags and finds that the power was set on 150 milliwatts, which he quickly resets to 5 watts. The fox is now sending out a strong scent for the hunters.

KD9IA drives right by in 11 minutes almost knocking over the garbage container with the fox hidden inside. Another half hour goes by, and N9TNW is the first to sheepishly lift the lid of the garbage cart and look inside; not seeing anything special, he walks away. Then KD9IA returns, not only lifts the cover, but digs through the garbage to find the fox! It isn't long when N9TNW and XYL are followed by N9FZL/ND9Z, N9PRC/N9UFV and, finally, WB9BBI. The rig is found by all hunters and recovered for the next event.

Amateur Radio can be exciting and fun. For more information about fox hunts, check with the activities committee of your local radio club. □



# PARTICIPATING Clubs and Organizations

## Taylor County Area Amateur Radio Club

Mike Schoenfuss, N9GHZ, Secretary

P. O. Box 401 • Abbotsford, WI 54405-0401

### MEETING ANNOUNCEMENT

The next regular meeting will be held on Thursday, September 7th at 7 p.m. in the Emergency Government meeting room located in the basement of the sheriff's annex to the Taylor County Courthouse, corner of 2nd and Ogden Streets, Medford, WI. Talk-in on the 147.15 Medford repeater (+ 600 kHz) or 146.52 MHz simplex.

### MEETING AGENDA/PROGRAM

N9GHZ will discuss the SAREX (Shuttle Amateur Radio Experiment) program, co-sponsored by NASA, AMSAT and the ARRL, and the possible involvement of the club and several area schools in this program. N9GHZ will show a videotape of the contact made with the space shuttle via ham radio, by the Hudson, Wis. Jr. High School in April, 1993.

### EXCERPTS FROM MINUTES OF AUGUST 4, 1994 MEETING

Meeting was called to order by President N9GEN. Present were WD9FWP, WA9YCT, N9GEN, KB9BLV, W9QHI and N9GHZ.

Minutes of the July 7, 1994 meeting were summarized. Treasurer's report was presented by Treasurer WA9YCT.

Continuing problems with several sources of manmade interference to the 147.15 club repeater were discussed.

Motion by KB9BLV, seconded by WD9FWP, to reimburse Taylor County Office of Emergency Government in the amount of \$20.00 for an invoice from Northway Communications, Wausau, for the installation of a DC power cable for the ham transceiver located in the Taylor County SRT van. Motion carried.

KB9BLV reported that he has still not been able to complete the transaction of the sale of the old repeater hardware to BRWA.

The recently announced upcoming subscription rate increase for *Badger State Smoke Signals* was discussed. Motion by

N9GEN, seconded by KB9BLV, to increase the annual individual charge to members for their *Badger State Smoke Signals* subscriptions, to \$6.00 a year, effective January 1, 1995. Motion carried. Meeting was adjourned.

### CLARK/TAYLOR COUNTY AMATEUR RADIO EMERGENCY SERVICE (ARES) NEWS

Mike Schoenfuss, N9GHZ  
ARES Emergency Coordinator

Don't forget to try to check into the weekly ARES net held Wednesdays at 8:30 p.m. on the Medford repeater (147.75/147.15). If the repeater is down or not functioning properly, alternate frequencies, in order, are 147.15 MHz simplex and 146.52 MHz simplex. You're also encouraged to volunteer for net control duty for the net.

### CONGRATULATIONS TO....

✦ Tom Wegner, N9UWY, Neillsville, who upgraded from Technician Class to General Class by passing the General written exam at the VE exam session held in Eau Claire on July 23. Tom had earlier passed the 13 WPM code test at Marshfield on June 11.

### OTHER NEWS

✦ Cliff Steevens, WA9YCT, Medford, who upgraded to Extra Class earlier this year, has a new callsign. It is AA9LE.

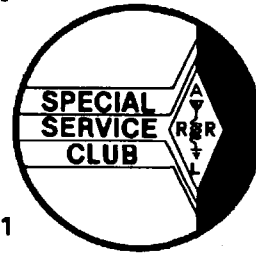
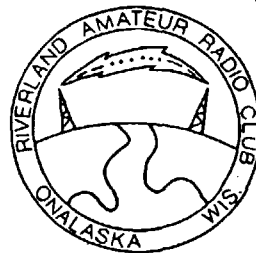
✦ Steve Dunn, Medford, who passed the exams to qualify for a codeless Technician Class license earlier this year, has his license now. His callsign is N9XTV and he is on the air on 2 meters now.

✦ Thanks to a generous donation made by member W9FPE, the Black River Wireless Assn. (BRWA) recently purchased a Micro Computer Concepts Model RC-1000 repeater controller. Also, final written approval has been received from the Wis. Assn. of Repeaters for the moving of the 145.27 Dorchester repeater to the Loyal, Wis. area. □

## Riverland Amateur Radio Club

Judy Williams, N9LGV  
Secretary

Club mail address: P.O. Box 621  
Onalaska, WI 54650



The August 2, 1994 meeting of the Riverland Amateur Radio Club was called to order by President Feroz, WU9N. There were 22 members and 2 guests present.

**Secretary's Report:** Judy, N9LGV, read the minutes of the July meeting. The Net Manager changed to Net Control. The minutes were approved as read.

**Treasurer's Report:** Mark, N9UNW, gave the treasurer's report. There are 88 paid members. The treasurer's report was approved.

### OLD BUSINESS AND COMMITTEE REPORTS

**Swap Fest:** Clarence, N9NXW, reported that he has passed out flyers at the Eau Claire swap fest, will be sending notices to the Winona and Rochester Clubs, and that the Antique Radio Club has done some advertising. Judy, N9LGV, will serve/sell coffee and donuts. Ticket sellers are still needed. Admission will be \$2.00 and a table will be \$3.00. Additional advertising will be put in the several area shoppers.

**Repeater:** Walt, AA9AW, reported that he is obtaining additional connectors for a good price. The mover date has not been set, but will probably not be until October.

**Repeater Noise:** Van, WA9FIO, reported that the noise that had been on the .97 repeater seems to have moved to an Eau Claire repeater. The source is anticipated to be located between the repeaters, and Eau Claire is following up on it at this time.

**Amateur Radio Weekend:** Kent, W9LZQ, reported that the event will be held on Saturday, Sept. 17, 1994. The site will be located at Valley View Mall and will be open to the public from 10 a.m. to 6 p.m. Kent made a motion that the Riverland Amateur Radio Club join together with the Mississippi Valley Amateur Radio Club and make this a joint project. Second by Karl, KB9EQI. Motion passed. Nook, K9EGO, has obtained a weather balloon which could be used to hold a vertical antenna. Someone will check with the airport about height requirements for the balloon. Bob, N9LZK, has posters which members were asked to post. Volunteers

and equipment are still needed. A joint committee of the two clubs will work out the details.

**VEC:** Rick, KV9U, nothing to report.

**440 Repeater:** Dan, N9PZC, reported the group still has club caps to sell. They would have a raffle following the club meeting. They will have a table at the swap fest. They were looking for donations of items to sell at the swap fest. A repeater site has been secured. It will be located on a tower in a quarry off La Crosse Co. "B".

**Super Link:** Clarence, N9NXW, has made a contact, but has nothing to share at this time. There seems to be a gap in the linkage at this time.

**Extend Meeting:** Rick, KV9U, made a motion, second by Karl, KB9EQI. Motion passed.

**Trailer:** Bob, N9LZK, had nothing new to report.

**Net Manager:** Mike, N9LXI, was absent so there is no report.

**Joint Picnic:** The joint picnic between the Winona Amateur Radio Club and the Riverland Amateur Radio Club will be held on Saturday, August 20, 1994 from noon until whenever. Bring meat to grill and a dish to pass, beverage and tableware.

### ANNOUNCEMENTS

**Bike tour/race:** The Winona Amateur Radio Club will be helping with emergency communications with the bike tour/race. They will be using the .97 repeater during part of the event. They were also looking for radio operator help for the La Crescent, MN rest stop.

Bike tour had passed through the .97 area today and they used the repeater for communications.

**Wednesday Evening Net:** Walt, AA9AW, will be running a longer net on Wednesday, August 10, 1994.

### NEW BUSINESS

None.

Motion to adjourn was made by Bob, N9LZK, second by Rick, KV9U. Motion passed.

Respectfully submitted by  
Judy, N9LGV, Secretary

## Washington County Amateur Radio Club

David Parkinson, KA9RNU,  
Secretary/Treasurer  
708 Robin Street  
West Bend, WI 53095



### MEETING MINUTES

The August 11th meeting of the Washington County Amateur Radio Club was called to order at 7:30 p.m. by our president, Mike, N9NBN. The minutes were also read by Mike, N9NBN. A motion was made by Keith, KY9P, to approve the minutes, seconded by Chris, N9SBQ, and the motion was carried.

The treasurer's report was read by Dave, KA9RNU. A motion to approve the treasurer's report was made by Gary, W9XT, seconded by Don, K9GR, and the motion was carried.

We had 20 members and 7 guests. New members who joined were Bob

(KA9NRH), Robin (N9XQK), Ken (N9QQW), and Charles (KB9FTI). Guests present were Phil (KC9CI), Gabe (N9QQA), and Jim (N9VGO). New licensees were Steve (N9XRQ) and Robin (N9XQK). Congratulations!

### OLD BUSINESS

Tom, N9LZW, reported for ARES. Tom welcomed anyone who were interested, help themselves to the literature found in front. He also reminded those who want to participate in a Simulated Emergency Preparedness; it would be held on October 15th.

Mike, N9NBN, announced the break-

fast schedule and invited everyone to come to our annual picnic at Sandy Knoll Park on Sunday, August 14th at noon.

Don, K9GR, thanked those who donated toward the repeater fund. We have enough at this time to begin construction of the tower. However, we'll need wire for the ground radials. He reported we'll begin transporting the tower sections in September, and will need manual help at that time. For any updates, be free to contact any of the repeater committee members.

Don, K9GR, also read a letter from Maury, W9MQD, in regard to the terms and conditions to which he transferred the responsibility only to the club, and to no individual, of the repeater frequency pair. Don, K9GR, made a motion to accept the terms and conditions which Maury described in his letter. It was seconded by Andy, KB9UE, and was carried. A brief

discussion followed.

Walt, N9LLS, announce a correction in the Field Day results he reported to us last meeting where he neglected to include the bonus points onto the score.

A motion was made by Andy, KB9UE, seconded by Bob, AA9EF, and the motion was carried.

The program was on packet radio and the use of AMSAT to make DX communication, and was given by Jim, N9VGO.

### Saturday 10:00 a.m. Breakfast September Schedule

Sep 3rd: Jimmy's, Jackson  
Sep 10th: Around the Lakes 2, Hartford  
Sep 17th: Corfu, Richfield  
Sep 24th: Slinger Inn, Slinger  
Oct 1st: Fay's, West Bend □

**Attention Hamfest Sponsors:** If you are advertising your event on our back page, remember: (1) You get one free display ad. Send a clean copy, on white paper, if possible, to K9ZZ at least 8 WEEKS before the event. This is your responsibility. (2) Be sure the date in your ad is CURRENT. This also is your responsibility. (3) Renewal time is here. A non-commercial hamfest card ad, including one free display ad, is \$68.00 per year.



# WATTS SNOO



WB9QFW 2 Meter Repeater 146.01 / 67 and Club Station

P. O. Box 923 • Plover, WI 54467

## MEETING MINUTES AUGUST 11, 1994

There was no regular meeting of CWRA in August. We chose to hold our annual fox hunt on the club meeting date instead.

Scott Jasper, NE9U, constructed a fiendishly clever fox, a remote transmitter on a timer, all of which fits into a small tackle box. Lori Jasper, KA9ZGD, hid the fox, and the chase was on.

The posse consisted of Scott, NE9U; Brian Feltz, WB9E; Jackie Kezeske; Doc Rifleman, WA9N; Frank Guth, W9BCC; Ray and Joann Dix, KF9BG; and N9NOG and Dave Golla, N9OVT. And that was the order they found the fox. Doc, WA9N, reported it was in a poison ivy patch, but no injuries were reported.

Since his wife hid the fox, and since he built it, it wouldn't "look good" to declare NE9U the winner, so through the authority vested in me as the person who writes these minutes, I can declare Brian Feltz, WB9E, won this round. Most of the hunters want another hunt again real soon: possibly a weekend before another club meeting.

The mighty hunters adjourned to the back yard of Bob Baird, W9NN, for debriefing and socialization. They were joined there by Art Wysocki, N9BCA; Tom Liska, K9CJM; Mary Eiden, KA9FAS; Wayne Johnson K9MIF; and, of course, Bob, W9NN.

My thanks to Scott for providing the information about the fox hunt and afterward for these minutes, since your respectful secretary was on the East coast at that time, thinking about winter in Wisconsin while dipping his family's toes into the warm Atlantic ocean.

"Best of luck and hope you're feeling better now" wishes to Ron Howe, NJ9H, who was the happy recipient of a new kidney midway through August.

David Tamres, KB9IIF, is looking for tower sections to get an HF antenna higher up in the air. Scott, NE9U, is also looking for tower sections. Let them know if you want to share your wealth.

Regular CWRA club meetings start up on September 14, with our annual election meeting. Mike Pagel, KA9LAQ, mentioned that we are looking for willing folks to run for offices, so let him know if there is any office you would like to stand for.

We will be in the UWSP Science building again, in room A107. Meeting dates will be September 14, October 12, November 9, and December 14, for the rest of 1994. Mark your calendars.

Joe Larson, N9JW, will be teaching Novice/Tech classes again this year. Start date will be October 5, in room A110. Class runs for ten weeks, and exams will be on Saturday December 10, in A107.

Respectfully submitted:  
Joe Larson, N9JW  
CWRA Club Secretary

The club also voted to approve holding the hamfest in 1995. Glenn, KF9VB, has tentatively offered to oversee the running of 1995's hamfest, and has offered the use of his photocopier to photocopy hamfest publicity fliers (to be handed out at other hamfests). Thanks for offering your services, Glenn! Discussions were also held about ticket and table prices, and the possible inclusion of seminars at next year's hamfest.

Since members have shown an interest in transmitter hunting, the club has decided to look into holding transmitter hunts. Dale, N6JSX, has extensive experience in conducting transmitter hunts. He has built many fox hunt transmitters, participated in, and run many transmitter hunts. Therefore, he has offered his expertise in helping to set up and run club transmitter hunts.

Yogi, WN9Q, showed the club the new memory keyer that was recently purchased for club use. This keyer is very versatile, and more than showed its usefulness at this year's Field Day.

John, NZ9Z, announced that the Northeast Wisconsin DX Association now has DXCC field checking capability. Club members John, and Yogi, WN9Q, can now receive QSL cards for verification of 100 countries, endorsements, etc. The DXCC application is then mailed into the ARRL, but the cards don't have to be sent in due to their already being verified as A-OK. Therefore, the risk of having your precious QSLs lost in the mail is eliminated.

Janice, N9IQZ, asked that club members who would like the club to purchase books should get in touch with her.

The meeting closed at 8:32.

73, and hope to see you on the bands!

Eric Rugowski, WD9IAB, Secretary  
MANCORAD

Check out the two nets held by the club. One is on Thursday night at 7:30. The other one is on Sunday morning at 10. Both are held on the club's 146.01/.61 repeater. Oh, and the club also has an HF net at 10:30 Sunday morning on 3965 kHz. All check-ins are welcome on these nets.

## August Meeting Attendees

Steve  
Bob

N9PBL  
KB9INK

Chuck  
Conrad  
Jeff  
Charlie  
Chuck  
Oran  
Craig  
John M.  
Glenn  
Yogi  
Vic  
Jim  
Len  
Red  
Ken  
Clancey  
Paul  
Mike  
John G.  
Tom  
Ken  
Kuby  
Lyle  
Bill  
Terry  
Howard  
Ron  
Janice  
Sharline  
Eric

N9WUN  
WD9ERM  
N9XEV  
W9GXD  
W9BZU  
N9VIA  
N9VIC  
NZ9Z  
KF9VB  
WN9Q  
WB9VYO  
N9KKG  
N9QFO  
N9GHE  
WB9GBX  
KB9ECW  
N9QFX  
AA9AA  
WB9ESM  
KB9IJR  
WD9ERO  
N6JSX  
WB9VTM  
K9DUX  
N9PZT  
KE9YD  
WS9X  
N9IQZ  
WD9IAB

## Correspondence

To the editor:

I have been getting BSSS for several years now, and never cease to be amazed at what a quality publication it is. It's hard to believe BSSS is put together by volunteers.

Please accept my appreciation for all of your work and that of the others who help you.

Sincerely,

Bert Spangler, W9ZZI

Thanks, Bert. It goes to show what happens when printer's ink gets in one's veins. A tremendous amount of credit goes to the volunteer writers, photographers, and cartoonists, as well. They are as much the life blood of BSSS as the staff! Without them, there would be little interest to print. We'll stay at it if they'll keep at it and if you'll keep reading it! - Editor



## SHEBOYGAN County Amateur Radio Club

Mike Musiel, KF9SJ, Secretary  
N9001 Dairyland Rd., Cleveland, WI 53015

The August 9, 1994 meeting of the Sheboygan County Amateur Radio Club was called to order by Steve, KF9KZ. The club meets every 2nd Tuesday at the Red Cross Building, 2032 Erie Ave., Sheboygan, WI at 7 p.m.

## ANNOUNCEMENTS

The next meeting of the SCARC will be September 13th at 7 p.m. A program on balloon launched radio experiments will be presented by N9VKC.

Stay in touch with the club! Tune in to the SCARC Monday night net (7 p.m. 147.06 +107.2PL) for the latest club events, or connect to NF9R via packet and download the current club calendar from the SCARC file directory.

## COMMITTEE REPORTS

Penny, N9TCF (Public Service Coordinator), thanked all who helped out in this summer's events. Chris, N9VKC (Net Coordinator), has asked for ideas for expanding our net activity on different subjects, bands, or modes.

Tom, AA9BJ (Education/V.E. Committee), announced that ham radio license and upgrade classes will begin in September.

Clayton, N9WDJ (Membership Committee), reported on the newsletter to be sent out to amateurs in Sheboygan county who are not members of the club.

## FUTURE EVENTS

September 13 - SCARC club meeting

September 17 - Plymouth Health Fair  
September 17 - SCARC fox hunt (tentative) 6:30 p.m. to 8:30 p.m.

## PRESENTATIONS

Tom, AA9BJ, gave a short presentation on 6 meter operation, and gave updates on current sunspot activity.

Penny, N9TCF, described some of the upcoming contests. The busy contest and QSO party season is upon us!

Mike, KF9SJ, discussed how to care for various types of batteries used in Amateur Radio.

## OLD BUSINESS

The use of the equipment donated by the family of Vic Hoffman, W9IDG, was discussed. Equipment that could not be used in the club station was put up for bid at the meeting, or has been sold at recent hamfests to finance the upgrade of the club station. Items retained for club use were a AEA PK-88, 4-element 2-meter beam, and Koss headphones.

## NEW BUSINESS

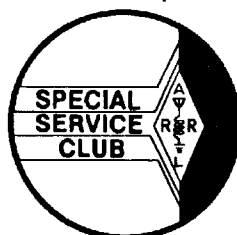
The executive board recommended the purchase of a Kenwood TM-732A for the club station. The motion was made by Jim, WA9SNU, that the purchase be made, and was discussed on the floor. All present voted in favor, with one vote against.

Submitted by  
Mike Musiel, KF9SJ

## Mancorad Radio Club

Eric Rugowski, WD9IAB, Secretary

P.O. Box 204 • Manitowoc, WI  
54221-0204



2-Meter Repeater: 146.01 Input/146.61 Output

## MEETING MINUTES AUGUST 10, 1994

The meeting was called to order by Club President Steve, N9PBL, at 7:35. The July minutes were approved by the club as printed in the *Smoke Signals*. Treasurer Janice, N9IQZ, read the treasurer's report. This was also approved by the club.

## OLD BUSINESS

In the past month, severe weather in Manitowoc County has resulted in the activation of the Manitowoc County segment of the NOAA severe weather net. To help the severe weather nets run in an efficient manner, Club President Steve, N9PBL, and club members Ron, WS9X, and John, NZ9Z, clarified how these nets should be run. The main points that were stressed, were that chatter should be kept to a minimum during the severe weather nets, and that all spotters should avoid contacting net control with extraneous or trivial data (example - "the sky sure looks dark, and it sure is raining"). Unless otherwise specified by the National Weather Service, net control should only be told about severe weather data (tornadoes, funnel clouds, winds in excess of 50 mph, rain in excess of 1 inch per hour, hail 1/4 inch or larger, etc.). This will help to prevent cluttering the net frequency, so that important information can be quickly routed to the National Weather Service, and mobile spotters who might be in dangerous situations can be better communicated with (to stay out of trouble).

Ron, WS9X, also commented on repeater etiquette for those who are new to repeater usage, or don't know about certain

aspects of repeater operation. He stressed several things:

One, wait a half second or so after you key up the mike before talking, this will give the repeater time to power up, and prevent the beginning words of your transmission from not being transmitted over the repeater.

Two, at the end of a transmission, wait for a couple seconds before keying up the repeater. This will give anyone who is not taking part in the conversation a chance to break in to use the repeater if they want to pass on any emergency related information, or just make a short call over the repeater.

Three, avoid saying "break" to break in for a repeater call. While some people don't mind if this word is used, it's only supposed to be used to pass on emergency information. Using it for other reasons only serves to confuse, and anger some people (when I was in college at UW-Madison several years ago, a ham used to break to get into a conversation being held over a local repeater, people ceased transmitting, and told him to go ahead with his emergency information; when he told everybody that he had no emergency, and just wanted to break into the conversation, people politely informed him about the usage of the word break). A good way to break into a conversation is by giving your call.

## NEW BUSINESS

The club voted to accept Cindy Meyer, N9XEX, for membership in MANCORAD. Cindy is the wife of club member John Meyer, NZ9Z. She is also a recent participant in the license classes held by MANCORAD for the Technician class license. Welcome to the club, Cindy.



Quarter Century Wireless Association  
Southern Wisconsin Chapter 162

Larry McCalvy, WA9JMO  
5400 Six Mile Road  
Racine, WI 53402



Caution is a virtue that many Hams hold dear. Herb Ladwig, W9PHJ is no exception; when a pending thunderstorm advanced on his QTH several weeks ago, Herb disconnected all his transmission lines from the transceivers. Better to play it safe than chance a lightning strike through an antenna. But the Old Thunder God sent Reddy Kilowatt's big brother, Reddy Megawatt, down the power line and into Herb's electrical service. The power surge went through Herb's packet station wiping out the computer, disk drive and TNC; then moved up the audio cable, burned a hole in the connector plug and killed the audio chip in his two-meter transceiver.

Good friend and neighbor Al Algiers, W9HR, attempting to assist Herb in ascertaining the extent of damage, brought his computer to Herb's QTH, plugged in the required cables and power cords and turned on the juice. Naught, nil, zip, nothing. Al returned home with the machine and re-plugged into his equipment; same result. Seems like Old Reddy was still lurking in Herb's gear hoping to give something or someone, one more shot before departing to where ever spent volts go.

Our annual picnic was attended by 32 members and spouses who enjoyed the fellowship, food and beautiful weather. During a very short business meeting prior to the start of the festivities, Travis Baird, W9VQD, was presented with QCWA's Century Award (when years as a member of QCWA and age equal 100). Travis, with a 24-year membership and at 81-years young, has a total of 105 years. Fern Fisher, W9LCJ, after a two-year losing battle

with our pond fish, hooked a nice size pan fish. However, Fern and those witnessing her catching feat, did take note of the large bass that swam past the fishing lure without so much as a glance. Next year, Fern, has to be the year for the record catch. We will all be waiting!

Our next business meeting will be held on Monday, the 19th of September at 7 p.m., at the South Port Restaurant, located at the intersection of Hwy. 50 and 47th Avenue in Kenosha.

Our Annual Meeting will again be held at the Harborside Holiday Inn in Kenosha on Sunday, the 16th of October, beginning at 1 p.m. Further details and directions will be in next month's article.

I am still looking for pictures from our past year's events. I would like to have our History files complete and up to date by the October meeting. Please bring what you have to share, picturewise, to the September meeting.

Our co-hosted Amateur Radio Classes are scheduled to begin on Wednesday, the 21st of September. I am still in need of instructors and assistants. The 8 weeks of classes will be held at the Gifford Elementary School, 8332 Northwestern Avenue (also known as Hwy "K") in Racine. Advance registration is requested and family participation is encouraged. We will offer a Novice, Codeless Technician, and General class, beginning at 7 p.m. For further details contact Larry McCalvy, WA9JMO, 5400 Six Mile Road, Racine, WI 53402, telephone (414) 639-7327.

73, Larry McCalvy, WA9JMO

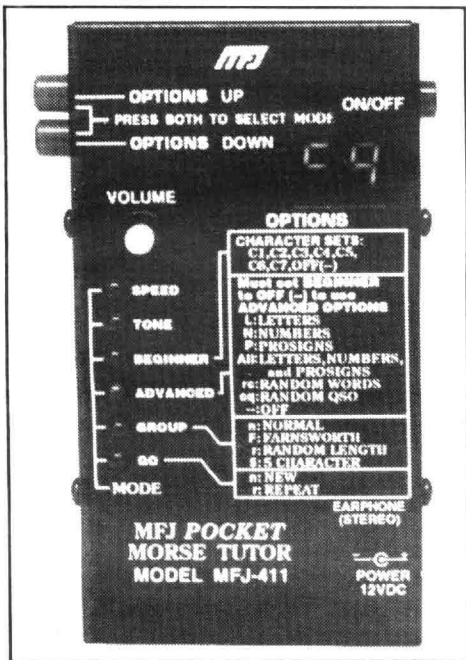
Racine Megacycle Club

Arne Moxness, KA9ZPY, Secretary  
3345 Newman Road • Racine, WI 53406

At press time, no information had been received for publication.

NEW PRODUCTS

MFJ-411 PERSONAL MORSE CODE TUTOR



Learn Morse code anywhere with this pocket-size Morse Code Tutor.. only \$79.95.

Here is an excellent opportunity for you to perfect or to learn your Morse code skills! This pocket-size tutor will take you from zero code speed to expert speed, from beginner to Extra Class, with this outstanding customized code practice.

A random QSO mode lets you start by practicing plain English QSOs to get you ready for the FCC code exam; a Word Recognition Mode lets you start practice copying entire words - just like the pros on 40 meters.

The MFJ-411 Personal Morse Code Tutor is a powerful learning toll that teaches you letters and numbers by association and relation. You will be copying code in no time!

With the Personal Morse Code Tutor, you can customize your practice sessions, you can vary your speed from 5 to 60 words per minute, and you can even set the volume and sidetone from 300 to 3300 Hz. It can be customized to whatever is right for you.

The Personal Morse Code Tutor will give you hundreds of commonly used words in Amateur Radio so that you can start recognizing entire words instead of fooling around with individual letters.

With practice, and the Personal Morse Tutor, you will learn to copy words in your head without writing them down and carry on an entire CW conversation without the use of paper!

You're stepping into the future with style when you purchase the MFJ Personal Morse Code Tutor, and you can take it anywhere! The Tutor is only 3 x 1-1/8 x 5-1/2 inches; it will fit into your briefcase, travel bag, or even your pocket. It uses a 9-volt battery (not included), or 110 VAC with the optional MFJ-1312B.

You can use earphones for private practice, or you can use its built-in speaker for group sessions.

The MFJ-411 Personal Morse Code Tutor comes with MFJ's full one-year unconditional guarantee.

For more information, or to order, contact any MFJ dealer or MFJ Enterprises, Inc., P.O. Box 494, Mississippi State, MS 39762, or call (601) 323-5869; FAX (601) 323-6551, or order toll-free at 1-800-647-1800.

- MFJ news release

Northern Wisconsin Radio Club

- Since 1923 -

Steve Hart, KA9OMC, Secretary

Route 1, Box 54 • Knapp, WI 54749



Greetings NWRC members and guests.

The club's next meeting will be on Sept. 27th at the Peppermill Restaurant in the Thunder Bird Mall, Menomonie. Meeting time is 7:30 p.m. Meeting format is a catchup on this summers activities and nominations for officers for the election on Oct. 25th.

It has become necessary for the club to move its banking due to new rules for minimum balances on accounts. We will make available to those attending the meeting our findings, along with a current financial statement of the account over the summer. Balance is \$108.50.

The club has heard from the following:

✓ KC4VXO, Gene Peterson, in Menomonie, is looking for help with his MFJ packet interface. Contact Gene at 235-5361.

✓ KF9DU, Jon Fuller, reports that daughter Susan is now N9XMV and mother Betty is N9XQJ.

✓ WA9CCB, Louis Forster, at Durand, reports longtime friend Bob Hulverson is now N9XAS.

✓ KF9CU, Arlene Kraft, reports son Steven, KE9RW, has received the Richard G. Chichester Memorial Scholarship at \$1000 to help further his studies at St. Peter, MN.

✓ WA9WRM, Larue (Tommy) Thompson, reports his memories of a fun day in the early 30's with NWRC. Tom indicated that he used to ride the street car in Chippewa Falls to the top of the hill with other local amateurs to get to Roy Bushland's garage where Roy shared his knowledge and goodwill. Roy (Silent W9GIT) was one of seven amateurs who started the NWRC in 1923.

✓ WB9WKO, Ron Purvis, involved NWRC members to handle communications for the annual fly-in at the Boyceville airport on Aug. 14th. Also attending were; N9MMC, KA9WZP, N9PPE, NX9F, N9GQU, and KA9OMC.

LOCAL AMATEUR NEWS

The Menomonie 146.01/61 MHz WB9YMB Red Cedar Repeater is celebrating twenty years this fall by implementing its third receiving site at the top of the Knapp hill. The association now operates two remote auxiliary sites (one at Menomonie and one at Knapp), along with the main repeater site at Colfax. Thanks to all the sponsors who continue to help support the system.

73.

NWRC Sec./Treas. Steve Hart

Eau Claire Amateur Radio Club

J. Brennan Fitzl, N9LIJ, Secretary

1418 Altoona Avenue • Eau Claire, WI 54701

MEETING MINUTES  
AUGUST 9, 1994

The meeting was called to order at 7:30 p.m. by President Kevin Zehr (N9-OHE).

The membership approved the minutes as published in the *Badger State Smoke Signals*.

Sue Eide (KB9EUP) read the treasurer's report.

Members and guests were introduced, with a total of 42 present.

OLD BUSINESS

Lighting strike on the packet equipment: The equipment has been repaired.

The radio and power supply from the Comm Center has been sold at the hamfest.

HAMFEST

There was some discussion of the problem of setup and takedown at the hamfest. Most discussion centered around the lack of volunteers to help take down and return tables after the event. Suggestions ranged from finding a location where tables will be provided and set up for us to discontinuing the event if there is so little interest.

Other discussions followed on prob-

Continued on page 13

FCC CALL SIGN UPDATE

The following is a list of the FCC's most recently issued call signs as of August 1.

District	Group A Extra	Group B Advanced	Group C Tech/Gen	Group D Novice
0	AA0RW	KG000	++	KB0OKY
1	AA1JV	KD1VZ	N1SUN	KB1BJW
2	AA2TB	KF2WQ	N2ZZY	KB2RFN
3	AA3IF	KE3NT	N3TBF	KB3BEH
4	AD4UV	KR4XT	++	KE4PKY
5	AB5VT	KJ5ZS	++	KC5IVA
6	AC6DS	KO6FG	++	KE6KYY
7	AB7DK	KJ7BA	++	KC7EUY
8	AA8PM	KG8KK	++	KB8UIY
9	AA9LL	KF9WU	N9YCO	KB9JAN
N. Mariana	KH0I	AH0AU	KH0DL	WH0ABA
Guam	WH2F	AH2CU	KH2KA	WH2ANK
Midway	++	AH4AA	KH4AG	WH4AAH
Hawaii	++	AH6NN	WH6WD	WH6CRH
Amer. Samoa	AH8K	AH8AG	KH8BG	WH8ABB
Alaska	++	AL7PS	WL7WJ	WL7CHS
Virgin	WP2O	KP2CD	NP2HQ	WP2AHU
Puerto Rico	++	KP4XE	++	WP4MRJ

++ All call signs in this group have been issued in this area.

- ARRL Bulletin ARLB069, 8/25/94



## Wisconsin Valley Radio Association

Dee Duckett, N9SDM, Secretary

P.O. Box 363 • Wausau, WI 54402

**Six Meter Repeater: 51.74 Input/51.24 Output**

At press time, no information had been received for publication.

### Last Minute News and Observations

• Elections will soon be underway here in the American Radio Relay League's Central Division for director and vice-director. Although not officially released by the League, at BSSS press time, candidates for director are incumbent Edmond Metzger, W9PRN, Springfield, Illinois. Challenging Ed is Neil Rapp, WB9VPG, of Evansville, Indiana. There are three vice director candidates: Incumbent Howard Huntington, K9KM, Lake Zurich, Illinois, faces candidates Mike Hoshiko, W9CJW, Carbondale, Illinois, and Ken Ebnetter, K9EN, Portage, Wisconsin.

The Central Division is composed of three ARRL Sections: Illinois, Indiana, and Wisconsin.

• SkyWarn nets were operating over nearly the entire state of Wisconsin the evening of August 27, as severe storms and tornados wreaked havoc in many locations. One village lost its entire fire department, and some fatalities and numerous injuries were reported.

The National Weather Service depends on radio amateurs as a prime source of first-hand weather observations. Amateur Radio spotters help save lives. Even NEXRAD radar can tell only part of what's happening in those severe weather cells. Local governmental entities would do well to remember this, and to keep federal law PRB-1 in mind, when deciding on the language in any restrictive tower ordinance. Our volunteer (free!) public service work saves lives, and we don't need to be and don't deserve to be hamstrung.

- Jim Romelfanger, K9ZZ

## Eau Claire Amateur Radio Club

*Continued from page 12*

lems with parking, unloading, cleanup of the grounds after the event, particularly with the large amount of metal left in trash bins which are nearly impossible and expensive for the fairgrounds to dispose of, and the problem of theft.

Thank-you cards will be sent to door prize donors by N9LIJ.

### NEW BUSINESS

Joe Eide (KB9R) reported that the new repeater should be here by the next meeting, but will probably not be installed by that time.

There was some discussion of the irritating hum on the K9UXP repeater. We know where it is coming from, and the responsible party is working on fixing it. To prove conclusively that it is not our own machine, we will shut down our repeater at 11:00 this evening and leave it off until 6:00 a.m. to see if the noise is still present.

The next fox hunt will be Saturday, August 20, 1994, at 10 a.m. Meet at Hardee's at Highway 53 and Eddy Lane at 9:40 a.m. Frequency: 146.55.

There has been a problem with News-line terminating early on the Sunday night net. KB9R will check out the problem.

Lunch Committee for the next meeting: N9UXC and N9XMR.

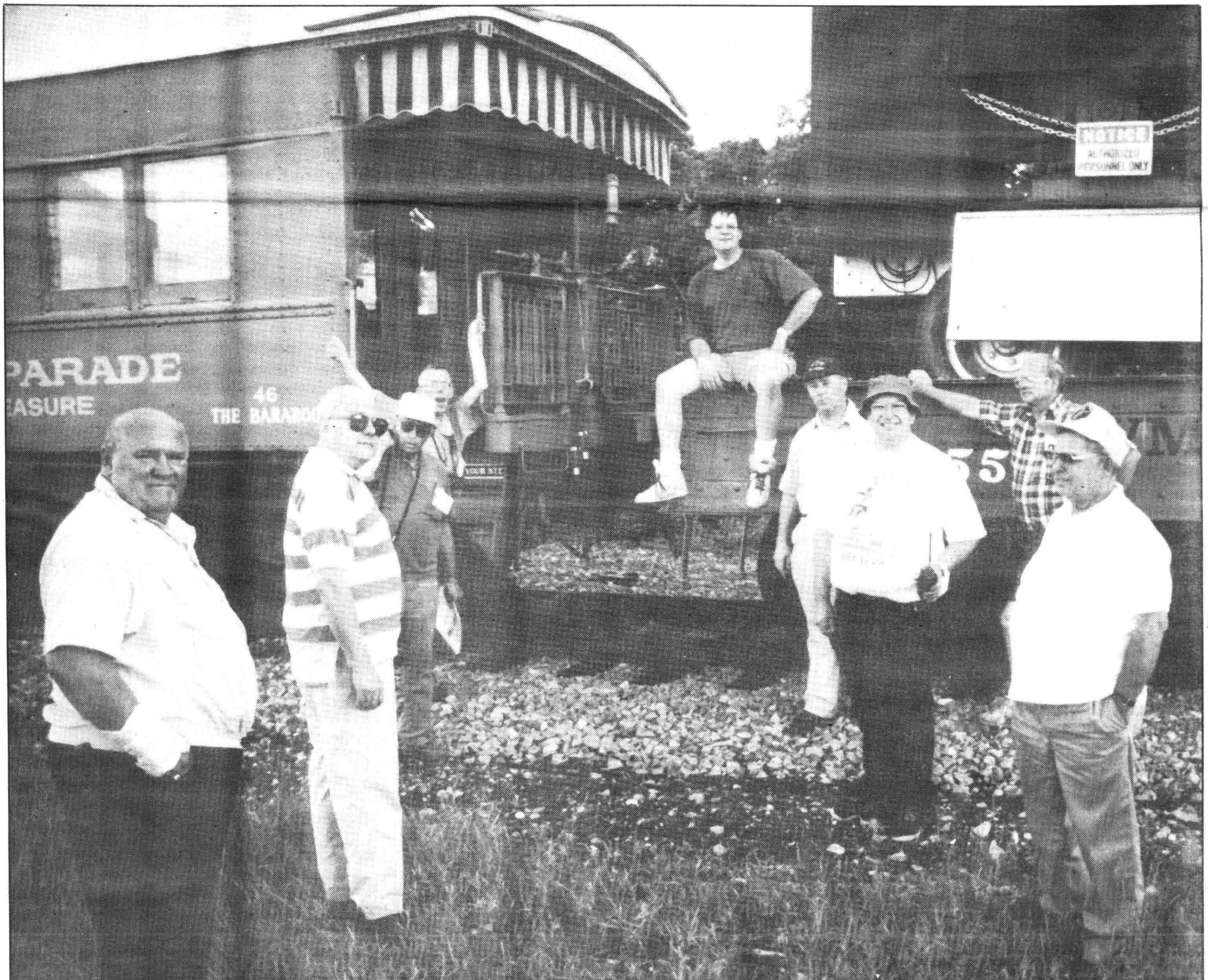
The meeting was adjourned at 8:38 p.m. local time.

*Respectfully submitted:  
J. Brennan Fitzl*

**Your vote for Kenneth A. Ebnetter, K9EN, candidate for Central Division Vice Director in the upcoming ARRL elections, would be greatly appreciated. Thank you.**

Authorized and paid for by Kenneth A. Ebnetter, K9EN

# All Installed and Ready to Go!

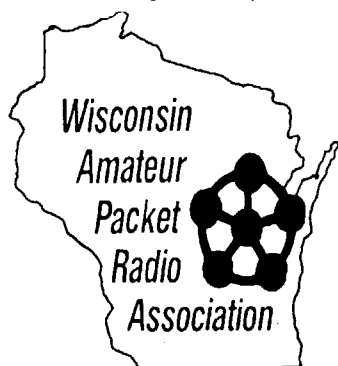


This photo was taken July 10, 1994, in the Chicago and North Western rail yard in Baraboo, after the installation of the Amateur Radio and other communications equipment and antennas on the Great Circus Train. The train began its two-day journey to Milwaukee on Monday, July 11. From left to right are: Lloyd Gorsiski, WB9RGO, Racine; Bob Goldstein, K9KJT, Milwaukee; Maury Mead, W9FBC, Neenah; Jim Romelfanger, K9ZZ (in a typically unflattering pose); Tom Kucharski, KA9EWJ; Dousman; Jack McLeland, W9ATK, Milwaukee; Al Johnson, AA7CS, Dousman; Don Evenson, K9JYX,

Baraboo; and Dick Simon, KB9RP, Racine. WB9RGO and KB9RP did chase van chores during the train's journey. AA7CS, K9JYX and others helped install the HF antennas on the flat car in the picture. K9KJT, W9ATK, and KA9EWJ operated the VHF and UHF ham gear and cellular telephones during the trip. W9FBC operated HF on day one, while K9ZZ worked HF on day two. HF in 1995? We're hoping so, and with an antenna in a configuration that will produce the proper performance.

- Photo by George Halper/W9SUF





# THE WISCONSIN PACKETEER

Wisconsin Amateur Packet Radio Association (WAPR)

Ted Heilmann, N9LLT  
921 8th Avenue • Grafton, WI 53024

Steve Loeffler, WB9ZRE, Editor, 123 W. Oshkosh St., Ripon, WI 54971

Note: No material was received from WAPR by BSSS printing deadline. The following two items were taken from WD9ESU BBS. We are also using the space to include the complete listing of Wisconsin club meetings.

## WD9ESU BBS MOVING

To the User's of the WD9ESU BBS. We will be moving off of the 145.07 frequency to 145.75.

This will eliminate a lot of the congestion we now are having on .07, with forwarding going on, and the ILL nodes broadcasting their connects all on .07, which makes it very hard for those of you trying to access the BBS.

I also have asked Phil, (WB9PCI) who handles the KA/NODE (SUNP) and Mike, (KF9AF) who handles the KA/NODE (FLARC) to join me in this move. With these two KA/NODES on 145.75, for the Users that need to use a Digi or a KA/NODE to get into the WD9ESU BBS, or to a friend across town, they will be available.

This move will take effect on 8-31-94.

So please pass the word on, if you hear anyone saying that they can not connect to the BBS on .07.

Thanks and 73 de Sysop Larry/WD9ESU

## SAMS PHOTOFAC LIBRARY

Greetings. Many of you have probably used the large collection of Sams Photofact (R) schematics for radio, TV, and other consumer electronics at the Madison Area Technical College (MATC) library. Well, there's good news and there's bad news. First the bad. The collection is no longer at MATC. They've been shipped off to some central reference library and are now only available by inter-library loan. This means that it will take several days to get the information. The good news (for some of you) is that they will be available from almost any public library in the state. They tell me that each library should have a copy of the Sams index (if your library doesn't, tell them to get one) where you look up the make and model of the equipment and then request the specific volume or folder of schematics by inter-library loan.

73, Kevin, WB9YHB.

## THE TEST POINT

(continued from page 4)

WMVS-TV studios, MATC Downtown campus in the C building. The address is 1036 N. 8th Street, Milwaukee. Enter at the North West entrance of C Building. Walk-ins are welcome. To register in advance, send a post card with your name, test or tests you wish to take, date you wish to take., your call sign, address and telephone number to Badger Examiners, Gary J. Sharbuno, WI9M, 5119 W. Willow Rd., Brown Deer, WI 53223. Telephone (414) 355-0237.

Also available now will be FCC General Radio Telephone Commercial exams. Fees are \$5.75 for the Amateur Radio exams and \$35.00 for the commercial exams.

## MADISON, WI

VE exams are held in Madison every second Saturday morning (September through May) of the month at 8 a.m. They are held at the operations building of the Madison Metropolitan Sewerage District at 1610 Moorland Rd. To get there take the Beltline (Hwy 12 & 18) to South Towne Drive. Go south 8/10 mile till South Towne Drive makes a bend and becomes Moorland Rd. and enter at gate.

You should bring a picture ID, your origi-

nal licence and a copy of your licence. For exams beyond the novice tests, bring a check for \$5.75, made out to the ARRL/VEC. If the special 610 form with the medical exemption is required, contact me beforehand to obtain one. No appointments are necessary to take exams. For further questions, please leave a message on the mailbox or phone me at (608) 832-6631.

Mark Jenks, N29B

RACINE, WISCONSIN - ARRL/VEC

Monthly - first Saturday, except January, July, and August.

Monthly exams are given 9:00 to 11:00 a.m. at the Red Cross Building, 4521 Taylor Avenue, Racine. Walk-ins are permitted.

Inquiries and registrations should be directed to William Firchow, Jr., NW9P, 1912 27th Street, Kenosha, WI 53140, telephone (414) 658-8390.

## TOMAHAWK, WI

Last Saturday of every month. Jan. thru Oct.

Tomahawk Volunteer Examiners (ARRL/VEC). Tomahawk, WI. No preregistration required, but appointment would be appreciated. Registration at 8:30 a.m. and testings starts at 9:00 a.m. For location or other information, inquire on 145.43 MHz. repeater or contact: Terry Collins, KB9AUP, W6564 Highway 8, Tomahawk, WI 54487. Telephone (715) 453-4633.

## STEVENS POINT, WI

Contact: Joe Larson, N9JW. (715) 344-1182.

## APPLETON, WI - ARRL/VEC

MANITOWOC, WI (HAMFEST)

KAUKAUNA, WI (HAMFEST)

Conducted by the Fox Cities ARC VE team. All test session in Appleton are held at James Madison Jr. High, 2020 S. Carpenter Street. Candidates check in between 8 and 9 a.m. with testing starting at 9 a.m. No walk-ins after 9 a.m. Contact George R. Croy, W9MDP, 2113 Twin Willows Drive, Appleton, WI 54914. (414) 730-0967.

## MENOMONIE, WI

The Northern Wisconsin RC will be sponsoring exams from 9:00 to 11:30 a.m. at the UW Stout Communication Center, 820 South Broadway, Menomonie, WI. Use the north entrance. Walk-ins only. Contact Jim Ley, NX9F. Work: (715) 232-1397, Home: (715) 235-3998.

## RIVER FALLS, WI

Exams are held in the church basement, at the United Methodist Church, 127 South 2nd St., River Falls, WI. Contact: Chuck Kelly, KA9YRV, (715)-425-2428.

## MARSHFIELD, WI (ARRL/VEC)

Sponsored by the Marshfield Area ARS. Held at St. Joseph Hospital, 611 St. Joseph Ave., in the 1 West classroom located adjacent to the Westwood Cafeteria on the main floor of the hospital. Use the main entrance or any other entrance and follow the signs to the cafeteria. Registration starts at 8:30 a.m. with testing starting at 9:00 a.m. Talk in on the 147.18 Marshfield repeater. Walk-ins welcome. Contact: Walter Friant, WBOKIN, 2310 Wallonie Drive, Marshfield, WI 54449 (715) 387-3870.

## GREEN BAY, WI (ARRL/VEC)

Contact N9NOF, Keith Summers, 918 Bluebird St., De Pere, WI 54115. (414) 336-6087, after 4:00 p.m.

## OSHKOSH, WI

Winnebago County ARC, Oshkosh Armory, 1415 Armory Place. Registration at 8:00 a.m. with

testing at 9:00 a.m. Contact AA9BA, (414) 685-5018 or KB9IME, (414) 233-7158.

## ADAMS, WI

Conducted on Saturday, November 5, 1994, by the Wisconsin Rapids ARC at Mid-State Technical College Annex, Adams, WI. Doors open at 8:30 a.m. with exams at 9:00 a.m. For information contact: Gene Santoski, K9UTQ, (715) 423-6368.

## KAUKAUNA, WI - SWAPFEST

MANITOWOC, WI, LAKESHORE HAMFEST

RACINE, WI - BIG BOY TOY SHOW

RHINELANDER, WI - NWARC SWAPFEST

STEVENS POINT, WI - CWRA SWAPFEST

WAUKESHA, WI - KMRA SWAPFEST

WAUKESHA, WI - MIDWINTER SWAPFEST

EAU CLAIRE, WI - ECARC HAMFEST

SOUTH MILWAUKEE, WI - SMARC HAMFEST

CEDARBURG, WI - ORC HAMFEST

ROCKFORD, IL - RARC HAMFEST

See the Swapfest column for additional information and contact persons.

## GREAT RIVER AMATEUR RADIO CLUB

DUBUQUE, IOWA - ARRL/VEC

Amateur examinations will be held on Sep. 11 (see Hamfest below) and Nov. 19 in 1994.

The Great River Amateur Radio Club VEs are now field stocked, which means retests can be given immediately.

Exams are held at 9:00 am at the Central Fire Station, 9th and Central in Dubuque. Use the basement entrance on 9th street. For more info, contact: Carl Clark, NOKAX, 145 Delicia Drive, Dubuque, IA 52001. Or call Carl at 319-557-9149. Talk-ins are on the 147.84/24, 147.63/03 and 146.295/895 repeaters.

Contact: Arthur A. Evans, KA9KLZ, 213 N Jefferson St., Cuba City, WI 53807-1558, (608) 744-2704

## DUBUQUE, IA - HAMFEST

There will be a VE test session in conjunction with the Dubuque Hamfest on Sept. 11, 1994. Tests will be held at St. Peters Luthern Church on Asbury Rd., two blocks east of the hamfest site. Hours will be from 1 pm to 4 pm. Please bring two forms of id, two copies of licenses or csce's, and a check for \$5.75 made out to ARRL VEC. No pre-registration necessary. For details contact: Carl Clark, NOKAX, 145 Delicia Dr., Dubuque, IA 52001. (319) 557-9149.

## LOVES PARK, IL

Third Saturday of every month. Northern Illinois Volunteer Examiners (W5YI VEC). Held at North Suburban District Library, 6340 North Second St. (Hwy. 251), Loves Park, IL. Contact: Dennis G. Eksten, W9SS, (815) 877-6768.

The following information received from ARRL Headquarters VEC.

## WISCONSIN

Marinette, 906-863-3477, Ed Engleman KG8CX

Racine, 414-658-8390, William Firchow

Sturgeon Bay, 414-743-3034, Carol Larsen, KA9HFA

Tomahawk, 715-282-6490, Greg Garner

The FCC has been taking up to 12-14 weeks to process license applications. We believe that the delay may begin to shorten now since the summer usually has a lower activity level than the spring, and the FCC has begun focusing additional daily staff as well as some overtime staff on the task. Also, worth noting is that as of June 8, 1994, the FCC has begun printing "TECH PLUS" licenses for those who have qualified. Lastly, also effective June 8th, the FCC will no longer be issuing fresh ten-year term

licenses for actions on other than new licenses or renewals (upgrades, call sign changes, name changes or address changes will carry the previous license expiration date).

#### NORTHERN ILLINOIS

09/10/94, Oak Forest, 708-448-0580, David Brasil, N9SN  
09/14/94, Chicago, 312-465-0981, Michael Leibovitz  
09/20/94, Aurora, 708-879-2217, Alan Ahasic  
09/27/94, Chicago, 312-233-0605, Harold Prichard Jr  
10/08/94, Oak Forest, 708-448-0580, David Brasil, N9SN  
10/12/94, Chicago, 312-465-0981, Michael Leibovitz  
10/18/94, Aurora, 708-879-2217, Alan Ahasic  
10/22/94, Chicago, 312-233-0605, Harold Prichard Jr  
10/29/94, Mt Carroll, 815-777-1002, Herbert Scarpelli  
11/09/94, Chicago, 312-465-0981, Michael Leibovitz  
11/12/94, Oak Forest, 708-448-0580, David Brasil, N9SN  
11/13/94, Danville, 317-793-3573, Betty Collins  
11/15/94, Aurora, 708-879-2217, Alan Ahasic  
11/26/94, Chicago, 312-233-0605, Harold Prichard Jr  
12/10/94, Oak Forest, 708-448-0580, David Brasil, N9SN  
12/20/94, Aurora, 708-879-2217, Alan Ahasic

#### EASTERN IOWA

10/08/94, Clinton, 319-242-9486, Roger Gorzney  
11/19/94, Dubuque, 319-557-9149, Carl F Clark  
12/10/94, Clinton, 319-242-9486, Roger Gorzney  
04/06/95, Clinton, 319-242-9486, Roger Gorzney  
06/10/95, Clinton, 319-242-9486, Roger Gorzney  
08/12/95, Clinton, 319-242-9486, Roger Gorzney  
10/14/95, Clinton, 319-242-9486, Roger Gorzney  
12/09/95, Clinton, 319-242-9486, Roger Gorzney

#### UPPER MICHIGAN

09/10/94, Harvey, 906-249-3837, Richard Schwenke  
10/08/94, Houghton, 906-337-2542, George R Turner  
12/03/94, Harvey, 906-249-3837, Richard Schwenke

#### MINNESOTA

09/03/94, St Paul, 612-222-7253, John Bellows  
09/10/94, Bloomington, 612-888-6187, Jerry Jensen  
09/17/94, Cottage Grove, 612-459-8678, David Harrell  
10/01/94, St Paul, 612-222-7253, John Bellows  
10/08/94, Bloomington, 612-888-6187, Jerry Jensen  
10/08/94, N Branch, 612-444-9814, Bradley Fern  
10/15/94, Cottage Grove, 612-459-8678, David Harrell  
10/29/94, Rochester, 507-288-6121, Richard J Baker  
10/30/94, St Paul, 612-222-7253, Jay Bellows  
11/12/94, Bloomington, 612-888-6187, Jerry Jensen  
11/19/94, Cottage Grove, 612-459-8678, David Harrell  
12/03/94, St Paul, 612-222-7253, John Bellows  
12/10/94, Bloomington, 612-888-6187, Jerry Jensen  
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#### CAPRA/KANTRONICS SEMINAR

Mark your calendar and plan to attend one of the best seminars on amateur radio digital communications ever given!

**Date:** Sunday, November 13, 1994  
**Place:** Harper College, accessible from I-90 off ramp on Roselle Rd, Euclid or Algonquin Avenues.  
**Time:** Tentatively 8am - 9am registration  
9 am - 5 pm Technical sessions  
With a 1 hr lunch break

Kantronics of Lawrence KS has generously agreed to put on the presentation and provide us with the excellent technical expertise of the Kantronics staff, including the well known speakers Phil Anderson, W0XI and Karl Medcalf, WKSJ. Kantronics has some recent product releases that have taken hold in amateur digital communications including their G-TOR protocol, the KAM Plus and KPC-9612 digital communications controllers. The crew from Kantronics will

## Yellow Thunder Amateur Radio Club

WB9FDZ (Original Club Call) • K9ODK (Robert L. Prine Memorial Call)



Raymond J. Matlosz, N9MLZ, Secretary

450 West 2nd Street • Reedsburg, WI 53959



The minutes of the last meeting (FOX HUNT) were not received in time to meet the printing deadline for BSSS.

The next meeting of the YTARC will be September. 15, 1994. The program will be the nomination and election of officers for 1995.

## Happy 25th Birthday, YTARC!

September 22, 1969

Dear OM,

There is a large number of Amateur Radio Operators in the Sauk, Cilumbia, Juneau and Marquette county area. As in other areas, some are active, some are not. Whether active or not, though, most Hams maintain an interest in what is surely one of, if not the most intriguing hobbies in the world.

There is a multitude of special interests; public service, traffic, DXing, ragchewing, VHF, RTTY, FAX, TV, FM, CW, SSB and even moonbounce. Regardless of your particular interest in our hobby, we are all amateur radio operators. Meeting other hams and working with them gives every ham a well rounded insight into his hobby. He becomes better informed as well as making a lot of good friends.

We believe the time has come to begin an amateur radio club in our area. There are more than enough hams for a good start. As many have expressed an interest in forming a club, a preliminary meeting will be held on Wednesday evening, October 15, at 7:30 PM at the Sauk County Courthouse in Baraboo, West door. Refreshments will also be served.

We are sure you will see lots of old friends and meet some of the newer hams also. There are lots of benefits to be realized from belonging to an active and aggressive club. The number of activities is innumerable.

Hope to see a good turnout.

73,

Jim Romelfanger,  
K9PKQ - Baraboo

Ken Ebnetter, K9GSC  
Portage

Don Evenson, K9JYX  
Baraboo

This letter was sent to every radio amateur known to the three whose names are at its bottom it in September, 1969. It resulted in great response, and in a club that is still vital and active. While many of the original members are now either Silent Keys or have moved to other cities or states, a few of the "originals" are still around, including the three at the bottom of the letter. Two of them have undergone call sign changes: K9GSC is now K9EN, and K9PKQ is now K9ZZ. This letter went not only to hams in the Baraboo area, of course; it went to amateurs in Portage, Wisconsin Dells, Prairie du Sac, Sauk City, Lodi, Mauston, Spring Green, Reedsburg, and other area localities and rural areas. Using news releases sent to local media on a monthly basis, and sponsoring classes regularly, the club soon grew to almost 90 members in late 1970 or 1971.

- Jim Romelfanger, K9ZZ

undoubtedly cover these new products, but the main thrust of their discussions will be technical, not product oriented.

A parallel session in TCP/IP station setup is planned, to be held in adjacent room by CAPRA. Info packets containing data on the Chicago metro network, Internet gateway listings, and user info on many of the BBS systems used locally will be available for purchase.

Attendance is free, but voluntary donations are encouraged. Updates of the schedule and map information will be available in a direct mailing within the area, notices at hamfests between now and November 13, in bulletins on Illinois, Wisconsin, Michigan, Iowa and Indiana BBSs and at your favorite ham radio dealer's store locations.

Hope to see you there!



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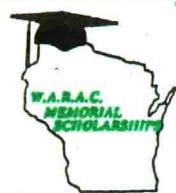
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Dan Vanevenhoven, N9LVS  
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Appleton, WI 54915  
414-739-5101

EXAM INFO:  
Larry Siebers, KD9IA  
414-788-3823

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Ron, WS9X: 414-793-4733 (Nights)  
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16th Annual

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Swapfest sponsored by Ozaukee Radio Club  
W70 N1018 Hampton Court • Cedarburg, WI 53012

Kettle Moraine Radio Amateurs

**SWAPFEST**

Sunday, October 23, 1994

Waukesha County Expo Center

Info: KMRA Swapfest P.O. Box 411  
Waukesha, WI 53187-0411

Northern Wisconsin Radio Club

**AUCTION**

February 28, 1995 • 7:00 p.m.

American Legion Post 53 • 634 Water Street

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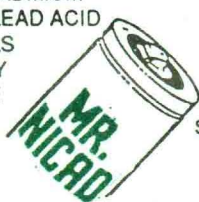
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